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ARTICLE I.—*On the Mechanism of Preternatural Joints, and on the Means of Cure.* By THOMAS T. HEWSON, M. D. Read before the College of Physicians, October 2, 1827.

IN every instance of fracture, the solution of continuity in the bone is accompanied by more or less laceration of the contiguous soft parts. As a necessary consequence of the rupture of the vessels, blood is effused, producing the swelling and ecchymosis observable on these occasions. When the injury does not extend to the absolute extinction of life in the part, a series of phenomena connected with the process of restoration is soon established; and although the operations, by which nature is enabled to restore the integrity of parts that have been injured, are in a great measure concealed, enough, however, has been revealed, by observation and experiment, to excite our interest and attention.

The first circumstance that has been noticed, is the enlargement of the capillaries; and with this increase of diameter are associated new and important powers, on which essentially depends the re-union of parts whose connexion has been dissolved. These vessels pour out a portion of their contents, which immediately, or very soon, assumes the concrete form; resembling, in all its sensible properties, the buffy coat so often observed on the surface of blood that has been drawn from the body; and consisting

of fibrine, in which is entangled a still larger proportion of serum, or liquid albumen. The cellular texture loses its power of being separated into lamellæ, and the soft parts are united, in a close, firm manner, round the place of fracture. These phenomena commence at an early period: they have been observed even as early as the sixth hour, and are generally completed within the first forty-eight hours, when the parts are in the state of greatest tumefaction. After this period, the blood which had been effused is gradually absorbed, and the colour which it had imparted proportionably disappears. This change takes place more or less rapidly, according to the quantity of blood effused, and to the activity of the absorbents. In a case of fractured tibia lately under my care, the discoloration was discernible in the injured limb until the close of the sixth week. But, under ordinary circumstances, it vanishes in a much shorter time. By the presence of the fibrine, which is now perfectly solid, the cellular texture acquires a degree of induration, that extends between the fasciculi of muscular fibres. In this state, neither the individual organization, nor even the nature of the several parts in the immediate vicinity of the fracture, can be distinguished. If examined in the field of a magnifying glass, the parts appear highly vascular, and the interstices observed in this net-work of vessels give to the part a mottled appearance; a circumstance, that, on many occasions, has been distinctly visible to the naked eye.

Occasionally, some of the muscular fibres are lacerated, and get entangled between the fractured extremities of the bones. Involved in coagulated blood, bruised and deprived of their due supplies from the circulation, these portions of the muscles become absorbed; and eventually not the slightest vestige can be discovered. The blood poured out in consequence of the rupture of the vessels, insinuates itself into the interstices between the fasciculi of muscular fibres; and the vessels distributed for the nutriment of these parts, are enlarged and greatly distended with blood. The muscles, especially those which pass immediately over the fracture, being surrounded by the indurated cellular texture, often acquire, though seldom before the tenth day, a remarkable degree of consistence, and a whitish-gray colour. This is to be ascribed to the yet unorganized fibrine, which we have stated to be poured out at an early period after the injury

has been inflicted. They retain this appearance as long as the indurated condition of the cellular texture continues. The parts thus become stiff; and, the muscles being rendered incapable of violent contractions, the fragments are less likely to be disturbed from the position in which they have been placed; whence may be drawn the practical advantage, of adjusting the limb and bringing the fragments into exact apposition, at an early period and before the fibrine is secreted.

Those who have experimented on the subject, have observed, that, from the fourth day, some of the muscles which passed over or were inserted near to the fracture, had become paler and denser than those that were more remote; that, on the sixth day, the muscular fibres nearest to the fracture, resembled very much, in colour and consistence, the indurated cellular membrane, with which they were in fact almost confounded; and, lastly, that a very sensible alteration in this condition of the parts was discernible between the tenth and seventeenth days.

The periosteum, which closely invests the bones, necessarily gives way at the time when these are broken; and the rupture of this membrane corresponds with the place of fracture. If the extremities of the fractured bones ride or overlap one another, the periosteum is bruised where these are in contact: the injury which the membrane thus sustains, occasions its destruction through the whole extent of the surface where the bones overlap. According to Breschet, this denudation of the bones is often effected in a day, or even a few hours. The divided edges of the periosteum contract adhesions with the surrounding soft parts; and, in the vicinity of the fracture, this membrane soon acquires a deeper colour, and may be very easily separated from the bone where there is no tendinous or aponeurotic insertion.

The periosteum now acquires a high degree of vascularity, becomes swollen and indurated; and in the neighbourhood of the fracture the thickness equals nearly two-thirds of a line. In this state it adheres to the muscles and other soft parts, by means of the cellular membrane, thickened and loaded with fibrine, from which it can with difficulty be distinguished. It has likewise formed very firm adhesions, connected with the fractured extremities; and is even continued into the cartilaginous inequalities surrounding these extremities, and projecting beyond their level. In

separating the periosteum, we tear away the substance interposed between the extremities of the fracture. It is this substance which we shall have occasion more fully to notice, as forming the nidus for the future callus.

The membrane secreting and constituting the involucrum of the marrow is likewise ruptured with the bone, and the blood is effused from the numerous vessels distributed through its substance. This effused blood, if considerable, forms a coagulum, which is continuous with the medulla. The softness of this substance, and the violence inflicted at the time of the injury, afford a ready explanation of the ecchymosis observed in the texture of the marrow, during the early periods succeeding the fracture. This transition from the natural state, is marked by little spots of extravasated blood, that become more sparse in proportion as the distance from the fracture increases.

From the time when the fracture is inflicted, until the fourth day, the colour of the marrow is of a brownish purple hue, owing to the presence of the extravasated blood: it then changes to a brighter red, as the extravasated blood is absorbed, and the numerous vessels have acquired a greater capacity, and now carry red blood, in consequence of the inflammation which has been established.

The medullary canal is diminished in its calibre, by the presence of a reddish, fleshy substance, continuous with the bone, denser, and more firmly adhering to the edges of the fracture: in the further progress this substance becomes cartilaginous, and then osseous.

At first, the surfaces of the fractured extremities have a slight covering of coagulated blood. On the second day, in addition to this substance, a ropy and slightly viscous matter may be observed, in very small quantity, extended over the surface of the fracture, and cementing them together. On the fourth day, this substance is accumulated in larger quantity, and exhibits unequivocal signs of organization. From the tenth to the fourteenth day, the reticular character of the substance interposed between the two surfaces of the fracture becomes more evident. It is stated to be more abundant, more consistent, more tenacious, though less red in colour, over the medullary canal.

The soft parts thus blended together, near the fracture, form

a kind of knob or protuberance, in which the broken ends of the bones are confined, and, as it were, buried. This swelling or tumour is not, at first, distinctly limited, nor is it rendered so until the close of the third or the beginning of the fourth week, when a gradual absorption in the cellular texture takes place, proceeding from without inwards; and it is then confined to the fracture, constituting the tumour of the callus, and insulating the fracture. From this period it is no longer confounded with the surrounding parts: the muscles, however, are observed to retain their adhesions. Before the twentieth day, the muscles and their fasciæ, that pass directly over the fracture, are never separated from the callus by means of a properly organized cellular texture. The tendons are sometimes lodged, for a certain extent, in a kind of canal, which embraces them on every side, and in which they are capable of moving. In other instances, they run in grooves on the surface of the callus.

Breschet describes the callus as a solid mass, into the composition of which, independently of the osseous fragments, there enter two principal textures, distinguished by their colour and consistence. The one is exterior, more or less white, very firm, and closely resembling a fibrous or fibro-cartilaginous substance, without, however, presenting any red fibres, but in which can be readily distinguished parts purely cartilaginous. This substance, covering the fracture, and extending to a certain distance beyond it, generally exhibits, at this period, in the parts most remote from the fracture, the hardness and other characters of bone.

The second principal texture is described by him, as situated under the first or towards the centre of the tumour, is red, or approaching to a violet colour, according to the light in which it is viewed: it is soft and easily torn, spreading over the surface of each fragment, and so closely applied to the centre of each of these surfaces, that it is impossible to denude completely this part of the bone.

The substance which was noticed as occupying the medullary canal, gradually increases in quantity until the canal is entirely obliterated. In the further progress, this substance acquires the character and consistence of bone, after having passed rapidly through the cartilaginous state. It therefore varies in appearance, according to the period in which the examination is made.

Sometimes it is extremely compact; and when the reticular or cancellated texture commences, it is seen most distinctly towards the distal extremity of the fracture. It is of a reddish colour, particularly when the cancellæ can be observed.

The ossification of the callus commences at the extremities, extends progressively towards the fracture, and finally pervades the whole tumour. This process commences about the fourth week; but the period when the callus is completely ossified is extremely variable.

The continual transition of the red intermediate substance into fibro-cartilaginous matter, and of this again into cartilage and bone, proceeds more or less rapidly, according to the constitution of the individual, and the peculiar circumstances of the case.

The diminution of the callus, as well as the ossification of its substances, appears earlier in the medullary canal than in other parts of the tumour: for the complete disappearance of the new osseous substance which had filled up the medullary cavity, and the restoration of that cavity to its full extent, are phenomena which occur long before there is any visible diminution of the callus.

As soon as the substance which causes the obliteration of the medullary canal has attained the consistence of bone, it becomes more or less cancellated. The cancellæ are at first very small; they subsequently enlarge, and coalesce, the partitions separating them being gradually absorbed, and the whole substance is converted into a complete bony network; which, however, soon disappears, and all traces of the ossification of the medullary canal vanish.

In that portion of the callus which is to constitute the more permanent bond of union, the cells are developed in proportion as the bony points unite to form the centres of ossification. And as these cells enlarge, and become less numerous, there is formed a compact osseous lamina, which increases in thickness with the gradual diminution of the tumour.

Through some defect or interruption in the process, it occasionally happens, that a perfect osseous union is not effected, and the bones admit of more or less motion, constituting what has been denominated a false or preternatural joint. In all the moveable articulations appertaining to the higher order of animals, we find

the extremities of the bones possessed of a smooth, polished covering of cartilage, and the opposing surfaces lubricated with synovia, enclosed in a regular capsule. There are not wanting many writers of eminence, who have described, I believe, rather from speculation than from actual observation, these preternatural joints as possessing all the characters of the moveable articulations. But, in support of such doctrine, I know of no record of the parts having been critically examined, so as to demonstrate the fact. Mr. S. Cooper, in his Surgical Dictionary, a work replete with valuable information, relating to the pathology and treatment of fractures, states, that in the Hunterian Museum there is a preparation of the forearm, where the resemblance to the natural articulation is greater than what Boyer has seen in other situations. But this expression is very ambiguous, and does not convey the positive information which the subject requires. As far as I have had an opportunity of examining the parts, I have uniformly found a firm ligamentous substance, extending from the fractured surfaces, and constituting the bond of union. The case adduced by Mr. Cooper, on the authority of Mr. Earle, does not invalidate this position: it merely affords evidence that the fragments were removed beyond the spheres of their mutual action, and that no kind of union took place. The case is too interesting not to be noticed here. He says, "I have seen a woman, under Sir James Earle, in the above hospital, (St. Bartholomew's) whose os brachii did not unite in the least, though it had been broken several months. Every attempt to move the bone occasioned excruciating torture. The woman died of some illness in the hospital; and, on dissecting the arm, the cause of the fracture not having united was found to arise from the upper sharp pointed extremity of the lower portion of the broken bone having been forcibly drawn up by the muscles and penetrated the substance of the biceps, in which it still remained." In Mundy's case, on whom I performed the operation as proposed by Mr. White, of Manchester, the figure of the two portions of the os humeri might, on a superficial examination, have been considered as possessing a perfect resemblance to a natural joint. The seat of the fracture was just below the insertion of the deltoid muscle; the upper portion was formed into a single cone, lodged between two cones, projecting from the lower portion, corresponding to the origin of the

brachiæus internus, which, arising by two slips has likewise received, not inaptly, the name of bicornis. These three cones, when deprived of the dense, ligamentous substance, by which they were cemented, presented a faint resemblance to a ball and socket; and in the separated state, might have imposed on those who did not critically examine the ends of the bone. In the majority of cases there has been found, extending from each fragment, a substance, in consistence and texture, resembling the cartilage interposed between the bodies of the vertebræ. This substance being flexible, the degree of motion observed between the pieces of bone is easily explained; and such structure is in perfect accord with the history given of the different stages of the process for the reunion of bones that have been broken, and perfectly consistent with the known operations of nature; whereas the doctrine of a complete resemblance of these false joints to the natural articulations would imply additional powers, and the production of new parts, of which we have no example. On this occasion I shall avail myself, in confirmation of these views, of the authority of Boyer, whose expressions on the mechanism of these joints are, "I have never found in their structure, any thing which could be compared with an articulation; neither capsular ligament, nor smooth cartilaginous surfaces. On the contrary, I have invariably found in the false joints of the thigh bone and humerus, which I have had an opportunity of dissecting, a fibrous, ligamentous substance, extending from one fragment to the other; and it is very probable that, with some modifications, it is the same with all the other cases which I have not seen."

Having endeavoured to ascertain the mechanism which prevails where there is an imperfect consolidation of the callus, our attention will very properly be directed to the investigation of the causes of this failure. The functions of particular parts are so intimately connected with the healthy condition of the whole system, that any disturbance of the general health must have considerable influence on the process by which the union of fractures is to be accomplished. Accordingly, a languid and inert state has been assigned as one of the causes. Its operation must necessarily be temporary, and will cease in proportion as the tone and vigour of the body are restored. This hypothesis may indeed be admitted in explanation of those cases of fracture where the union is

suspended for a time, and yet becomes perfectly solid when the patient has been relieved from an irksome confinement, and allowed to enjoy the invigorating influence of air and exercise. These remarks apply equally to certain morbid conditions of the body, as syphilis, scurvy, &c., which have been occasionally adduced to explain the formation of an imperfect callus; for when such disorders of the constitution have been corrected, the bones have been observed to become firmly united.

In fractures which have occurred in pregnant females, it has been remarked, that the union has taken place very slowly, and, in some instances, that it has not been completed until after parturition. The operation of this cause is necessarily confined to the sex, and is even in them extremely partial.

When the bones have been broken, the coaptation of the fragments, and the due retention of them in a state of rest, are considered as essentially contributing to the perfect union. The production of a preternatural joint has, therefore, been, by many writers, ascribed to negligence on the part of the practitioner, or to restlessness in the patient. But in cases of compound fracture, the treatment generally requires that the limb be moved every day, and the relative position of the fragments is, consequently, more frequently disturbed than can occur in the treatment of simple fractures; and yet an imperfect consolidation of the callus is not more common in fractures of the first description. And the influence of this cause cannot be admitted in those cases of fracture, as of the leg, where the fibula has united, while in the tibia the union has not been completed. The case of Peckup, as recorded by Mr. White, is illustrative of this kind of irregularity in the union of the two bones: and three cases of the same kind have come under my notice, one of which I shall have occasion to mention in a subsequent part of this essay.

This review, however humiliating the reflection, is not calculated to afford any one precise information respecting the object of our inquiry. But the improvement of medical science has not been much advanced by the substitution of theories unsustained by the phenomena with which we are acquainted. And although we remain ignorant of the causes which prevent the consolidation of the fracture, we are not altogether unprovided with means for

remedying the defect, and for restoring the parts to the condition fitted for the due performance of all their functions.

The most ancient method of treatment is that recommended by Celsus, who directs that the two portions of bone be forcibly rubbed against each other, so as to excite inflammation and a deposition of osseous matter. Mr. White records a case of broken thigh bone, where the cure was effected by the patient getting up and attempting to walk, while the limb was confined in strong leather splints. This practice was advised by Mr. Hunter, and has received the sanction of other eminent surgeons. The success, however, appears to have been very limited; and the majority of persons with disunited fractures were doomed to the inconvenience of a useless limb, or were compelled to submit to its amputation. With the hope of obviating these severe alternatives, in the year 1760, Mr. White proposed, in the case of Robert Elliot, a healthy lad of nine years, the following operation: by making a longitudinal incision down to the bone, by bringing out the ends of it, which might be done with great ease, as the arm was flexible, and cutting it off either with the saw or pincers, and then replacing the two portions of bone, and pursuing the treatment as in compound fracture. In this instance a perfect union was established; and similar results have occasionally been obtained by other surgeons, but the success has been by no means uniform. The operation is, unquestionably, severe, requires a very cautious procedure through the different steps, and occupying considerable time, necessarily subjects the patient to long continued pain, and all that distress which is usually felt when cutting instruments are employed. The difficulties, the danger, and the frequent ill success of this operation, suggested to Dr. Physick the propriety of adopting a different mode of treatment. The process of passing a seton into the natural cavities, with the view of producing permanent adhesions between the contained and containing parts, has been frequently resorted to. In the radical cure of hydrocele, and in the treatment of extensive abscesses, surgeons have long been in the habit of introducing setons, with the view of exciting granulations and promoting adhesions between opposite surfaces. Moreover, the records of surgery afford abundant proof of anchylosis having been produced, by setons passed into the natural joints, in the treatment of the diseases

with which these parts were affected. It was in the year 1802, that Dr. PHYSICK had an opportunity of treating a disunited fracture of the humerus by seton; and, in the course of five months, the union was completed, and the man was discharged from the Pennsylvania Hospital, enjoying the full use of his arm. Since the above period, this mode of treatment has been frequently employed, both in this country and in Europe; and, I believe, with pretty general success. The operation of passing the seton was, however, twice ineffectually performed by Dr. PARRISH in the case of Mundy; and the failure in this instance, I think, proves that it is not adapted to fractures presenting irregular surfaces. After this failure, desirous that no means should be left untried by which a reasonable hope might be entertained of the man's recovering the use of his arm, it was determined, in a consultation, in which all the surgeons of the house concurred, that the operation of sawing off the ununited extremities of the bone should be performed. The man bore this very painful operation with admirable fortitude, and after a lapse of four months the union was completed and the powers of the limb restored.

In addition to these means, Dr. HARTSHORNE has recommended the application of caustic, in the instance of the superficial bones, as the tibia and ulna, so as to act immediately on the part where the fracture was seated. In the deeper seated bones, the influence of the caustic will be extended through the muscles and other coverings of soft parts to the imperfect callus, exciting the healthy actions in a manner corresponding to what we observe in the treatment of many diseased joints. In illustration of this mode of treatment, I beg leave to offer the following case; which, in other respects, is not altogether deficient in interest, as it affords an example of disunited fracture in a person of sound constitution, and at the most vigorous time of life.

Case.—Isaac Hervy, aged 35 years, of florid complexion, and of square stature, was admitted into the Pennsylvania Hospital, on the 15th of March, 1827, on account of an imperfect union of the tibia, near to its centre. In August, 1818, both bones of his leg were broken. He was subjected to a severe antiphlogistic treatment, and lost several pounds of blood. It was not until six weeks after the accident that he was allowed any portion of animal food. When admitted, he was unable to walk without the assistance of crutches,

and he experienced great pain when he attempted to rest on the limb. On the 23d of March, a week after his admission, I made a transverse incision through the integuments down to the preternatural joint; I then removed a considerable portion of the ligamentous substance constituting the bond of union, after which I applied the caustic potash to the surface which had been exposed. This done, the part was covered with a poultice, and the limb put at rest. The succeeding day the man experienced considerable pain, accompanied by convulsive twitchings of the leg. These were relieved by moderate doses of opium. On the 7th day, inflammation and swelling came on, but subsided with a free suppuration, that proceeded from behind the tibia. In eight weeks the wound had cicatrized; and, at the end of twelve weeks, the man left the hospital, the tibia, apparently, perfectly united.

ARTICLE II.—*History and Dissection of a Case, where a regular communication had been established, by disease, between the Ovaria and Bladder.* By J. MARSHALL PAUL, M. D.

THE subject of the following interesting case came under my notice about the beginning of the present month; and I had the satisfaction of ascertaining, after her death, (in company with my friend Dr. JAUDON,) the real nature of her disease. As the patient had been under the care of Dr. SAMUEL WILSON, previous to his leaving the city, for a long time before she was transferred to me, I have obtained from him the following history of her case up to that period; which will prove interesting, and will prepare us, in a measure, for the result which the post-mortem examination made known.

Dear Sir,

The following history of the case of M. R——d, is from my note-book, excepting the latter part, which is from memory alone. I have only to regret that it is not more minute. Its correctness you may depend on.

On the 22nd of April, 1826, I was called to visit M. R., a widow

woman about forty-two years of age, and the mother of several healthy children. Since the birth of her last child, perhaps four or five years ago, she had been afflicted with violent pains in her abdomen, coming at intervals upon her, and attended with an enlargement during the continuance of the attack, resembling pregnancy at the full term. The pains, commencing in the back and loins, and extending round to the pubis and down the thighs, were most excruciating, ending frequently in a state almost of insensibility. Conceiving the uterus to be the seat of inflammation, I directed free depletion, some purging medicine, and the lightest diet. A blister was placed afterwards upon the lower part of the abdomen, from which some benefit was derived. A cure, however, not being effected, recourse was had to the blue pill, and after due perseverance she appeared to be entirely relieved. An eruption resembling closely the efflorescence of intemperance, and in the same situation upon the face as that mark of the drunkard, was entirely removed by the course of medicine, but made its appearance again after her recovery.

On the 1st of July, 1826, I was again requested to see her, and found her labouring under a return of her old and painful symptoms. She attributed the relapse to too much exercise and exertion in the care of the house and family of a lady travelling; which charge she had undertaken, although in a state of weakness and exhaustion. The violence of the attack, at this time, was even worse than before.

After treating her for a day or two with antiphlogistic remedies, I called on Dr. Harris, who kindly saw the patient with me. After a minute inquiry into all the symptoms, and an examination per vaginam, it was concluded that there existed a scirrhus of the uterus. The os tincæ was found hard and knotty, and so extremely tender to the touch, that the slightest pressure excited a recurrence of the spasmodic pains. There was some discharge, but neither fœtid nor copious. Fever also made its appearance in the afternoon, and continued through the night, with a remission in the morning.

The plan of treatment adopted, was the following. The patient was put on a low regimen; with the occasional use of laxatives, and of anodynes, when harassed by the violent pain. Two grains of the best *ext. cicutæ* were directed to be taken twice in the day,

with a pill of the *carb. sodæ*, also twice; the quantities to be increased as the constitution became accustomed to the medicine. She was cautioned also against exertions of every kind, and ordered to keep herself as quiet as possible. Under this system she became much better, and strong hopes were entertained of a perfect cure being effected. On the 22nd of August, the pains had entirely left her; and she continued free from them for some time. But the symptoms returned again; and after a long perseverance in the use of the cicuta, it was finally abandoned. The antiphlogistic regimen, however, and the use of anodynes, were continued. In this state she remained, alternately better and worse, until the middle of the winter, by which time the symptoms had become much aggravated. She had now frequent attacks of suppression of urine, and discharged much matter, apparently of a sabulous character; but which, when tested in the usual manner, did not exhibit either acid or alkaline properties. Sometimes also she voided with the urine, portions of a substance resembling *pieces of bone* discharged from carious ulcers on the tibia. One of these was rough and scabrous, and more than *an inch in length*. Their passage through the urethra was attended with the greatest pain. For her relief, she used almost every variety of antilithic medicine; but the chief dependance was upon free dilution with mucilaginous and demulcent drinks, together with very large doses of the acetous tincture of opium. Mucilaginous injections into the bladder were also used; for the character of the discharges at this period, led to the supposition, that a communication had been formed by ulceration between the bladder and the womb. In the course of the last spring, she was attacked with dropsical symptoms. These were removed; but, the disease of the uterus continuing, she was at length confined to her bed from debility. The irritation was wearing out her constitution. Her emaciation was extreme; and I was confident, at the time you were good enough to take charge of her, during my absence from the city, that the warm weather would probably terminate her sufferings.

I remain yours, &c.

S. WILSON.

To Dr. J. M. Paul.

August 22nd, 1827.

In addition to the statement of Dr. WILSON, it is only necessary for me to add, that, for the twenty days she was under my charge, there was no material alteration either in her symptoms or treatment, and she gradually declined under the disease, and expired on the morning of the 21st instant.

Dissection.—On exposing the cavity of the abdomen, and removing the omentum, which adhered slightly to the intestines, &c., in many places, we discovered the bladder to be very much enlarged, and apparently in a gangrenous condition. It was supported, and partly surrounded, by a large diseased mass, which occupied, in a great measure, the whole superior portion of the pelvis; resembling the brain in its external appearance, as to size and colour. At the superior part of the fundus of the bladder, a small opening existed, from which purulent matter escaped; but whether this aperture was formed by detaching the omentum from it or not, I am not able to state. On passing the finger into this opening, its inner surface communicated a sensation of roughness to the touch, caused by its mucous membrane being completely studded with fine particles of matter, resembling sand or partly dissolved bone. By making an incision into the bladder, a regular communication was found to be established between its posterior-superior part, and the diseased mass before mentioned; which, on further examination, proved to be the ovaria, united, very much increased in size, altered both in appearance and structure, and converted into a fatty substance, (as described by BAILLIE in his morbid anatomy,) containing a considerable quantity of *hair* similar to that on the human head, besides *five teeth*, perfect in all their parts.

The uterus was found occupying its usual position, but wholly concealed by the tumour; the os uteri was natural as to size, but somewhat indurated; the fundus larger than ordinary, but not varying much from the healthy standard. On exposing the uterine cavity, it was discovered to be very small, and the *communication* which naturally existed between it and the os tincæ, was completely *obliterated* by previous inflammation, and the whole cervix converted into a firm cartilaginous structure.

J. MARSHALL PAUL.

Philadelphia, Aug. 26, 1827.

ARTICLE III.—*Observations on Colica Pictonum, and other affections arising from the deleterious operation of lead on the system.* By RICHARD HARLAN, M. D., &c.

HAVING had, for a number of years, the professional charge of the labourers attached to one of the most extensive white-lead manufactories, and chemical laboratories, in the United States, I have had an opportunity of accumulating much practical experience in the treatment of those disorders arising from the deleterious operation of white-lead on the system. I have thought that a brief essay on this subject, including the outline of the practice I have pursued in this complaint, could not fail to prove interesting to the medical public.

The men employed in this establishment are, for the most part, of robust constitutions, and are principally natives of Ireland and Germany. The factory is placed in a situation in other respects healthy, and personal cleanliness is much insisted on by the careful managers.

In this, as in most other maladies, a certain degree of susceptibility of the system appears necessarily to precede the attack. Drunkenness, or habitual dissipation of any kind, renders the system peculiarly liable to the disease, and frequently leads to a fatal issue. Sudden transitions of temperature, together with exposure to cold and moisture, are predisposing causes. The greatest number of cases have fallen under our notice late in the spring and early in autumn.

Of the youths who constantly work at rolling the sheets of lead, in the melting room, only one has been affected with *lead disease.* A boy, about 12 years of age, was attacked at night with paralysis of all his extremities, and with pain in the abdomen. He was treated with mercury, cathartics, &c. He recovered—returned to work, and again relapsed in three or four days. He finally recovered, with the usual remedies, and was discharged from the manufactory.

The different stages of manipulation in the manufacture of white lead, render the labourer obnoxious to these affections, and also give rise to some peculiarities in the attack and in the symptoms. The

most dangerous operation consists in the packing of the kiln-dried white lead into barrels, a process performed by *negroes*, who are employed for the purpose at short periods, and at considerable intervals; and, though a great quantity of dust is necessarily received by inhalation into their lungs during the continuance of their labours, but a single case of the disease affecting the negro has occurred during my professional attendance on the manufactory: this man had a severe attack of colica pictonum, from which he recovered. Those hands employed in melting the metal in the casting-room, are more liable to be attacked with apoplectic or epileptic convulsions, without pain in the bowels during the first stage; and such cases are more apt to terminate in *paralysis*.

Frequent opportunities have occurred to demonstrate, that man is by no means the only animal subject to this disorder. Dogs, cats, cows, and chickens, not unfrequently die with this affection. In the latter, "post mortem" examinations have displayed mortification of the intestines. Symptoms of cerebral derangement have manifested themselves in the feathered tribe, when labouring under the deleterious effects of white lead. After a few moments of cataleptic abstraction, they have been observed to dash their heads against the wall, or any other resisting object.

As a rational practice in any malady must always vary, according to the symptoms, or, in other words, according to the organ or set of organs, whose functions are principally impaired, I propose to offer a few observations on the different modes of attack, together with the various methods of treatment instituted in this complaint.

I have formed no particular theory as to the essential seat of the disorder called "*lead disease*," that is to say, whether or not, the liver, colon, stomach, brain, or vascular or nervous systems, are *primarily* affected; and shall confine my observations to such symptoms as have first come under the cognizance of my senses in the numerous cases which it has been my lot to treat.

The saturnine carbonate, or white lead, taken into the system, either by the stomach, lungs, or skin, and I believe it may enter the system by all these organs, does by no means invariably produce colic, pain in the bowels, or constipation as an early symptom. On the contrary, I have frequently observed that some of the most obstinate and severe cases of "lead sickness" are ushered in by a

diarrhœa, sometimes continued for two days, but which is mostly checked by proper remedies in a few hours. In other cases, the patient is attacked, generally at night, with symptoms which I have designated as *apoplectic*, from the suddenness of the attack, the stertorous breathing, and insensibility, generally attendant; but at the same time, it must be remembered, that there exists a state of the system very different from that which prevails in apoplexy. Together with the symptoms above stated, the patient is cold, particularly his extremities; his countenance, in place of being suffused, is pallid; and convulsions of the whole frame frequently occur. This order of things continues from a few hours to three or four days. In these cases, as might have been anticipated, the patients do not bear general bleeding. The best practice consists in the administration of calomel and opium, notwithstanding the constipation of the bowels and determination to the head, resorting, at the same time, to the early use of cathartics. These remedies, assisted by the application of cups to the head, and a blister to the back of the neck, with rubefacients to the lower extremities, will generally prove successful in curing the disorder, or in transferring it to the bowels. I have witnessed one case of this description treated differently, which terminated in the death of the patient. A young man, of rather a nervous temperament, who had been employed in grinding white lead in oil, was attacked, early the next morning, with convulsions, and with other symptoms partaking of the character of apoplexy and epilepsy. This patient residing at the extremity of the city, it was late in the day before I was enabled to visit him, when I found a young practitioner in the act of bleeding him from the arm. I soon explained to the doctor my opinion of the nature of the disease, and indicated to him my mode of treatment; but he could not be made to comprehend that opium could be administered with safety in any disease in which constipation is a prominent symptom; in fine, he refused to be advised, or to leave the patient. We subsequently learned, from the relatives of the patient, that the complaint left the head in a short time, and fixed upon the abdominal viscera; (which is the usual progress of this form of the disease;) and that the patient died in three or four days, with symptoms of mortification of the intestines.

But by far the greater number of patients afflicted with "lead

sickness" display the symptoms of old-fashioned colica pictonum, or "dry belly-ach:" in which case we find them labouring under excruciating griping pains in the region of the umbilicus; the skin of the abdomen is thrown into folds or knots; obstinate constipation prevailing, with febrile excitement; the tongue being sometimes white, at others covered with a thick brown fur. The pain is principally spasmodic, occurring at intervals of different durations, and is seldom entirely intermitting. After numerous trials of various remedies, my practice has, for a length of time, been fixed and settled.

We will take, for example, a violent case, characterized by the above detailed symptoms. It is my practice to bleed from the arm; and in some cases cups are applied to the abdomen, or a mustard plaster, followed by an epispastic over the inflamed skin. But, at all events, I lose no time in administering calomel and opium, in the proportion of ten grains of the former to two or three of the latter; and, if there be no nausea present, two grains of ipecacuanha are added. The whole powder is repeated every two or three hours, until pain is relieved, or ptyalism is induced; it is then omitted, and one or other of the following cathartics given. ℞. sal. eps. ℥j., magnes. ustæ. ℥ss.; mix them in a pint of water, and take from a wine-glass-ful to a tea-cup-ful every two hours. Or ℞. rad. rhei. contus. ℥ss., fol. sennæ ℥j., sem. cardam. ʒij.; decoct in one pint of water. The dose is one wine-glass-ful every two hours, until the bowels are evacuated.

At this stage of the disease, patients will require large doses of the cathartic; and, if administered earlier in the case, or previous to the free administration of mercury and opiates, no quantity that the stomach is capable of containing can be made to produce a cathartic effect on the bowels. I have frequently witnessed the whole quantity of both the above prescriptions taken, together with the addition of castor oil, without any effect. As the excitement of ptyalism is of vital importance in violent cases, the blisters on the abdomen are to be dressed with mercurial ointment, and mercurial frictions, to a greater or less extent, are to be resorted to; especially if any torpor or insusceptibility in this respect is observed in the patient.

As valuable adjuvants in such obstinate constipations, the use of turpentine injections, or injections of molasses and water, with

half an ounce of table-salt, is next to be resorted to. In some cases, where the heat of the abdomen was very great, attended with soreness on pressure, anxiety, and restlessness, with other symptoms denoting approaching enteritis, the most decided advantages have been obtained by the use of large and frequently repeated injections of cold pump water. In this manner heat is abstracted, and inflammation prevented or arrested. Affusions of cold water on the lower extremities have also been resorted to with success in similar constipated cases. This treatment, under ordinary circumstances, will seldom fail of success. One patient recovered after having displayed every character of the hippocratic countenance: a state of things, in the present instance, induced by gastric sympathies; the patient, previous to being relieved, having ejected from the stomach a large quantity of matter, resembling thick green paint.

Cases still more violent and difficult of management remain to be noticed. I allude to those attended from the commencement with severe irritability of the stomach and bowels, and with obstinate vomiting, the stomach ejecting every article taken. I have employed laudanum, peppermint, calomel and opium, and oil of turpentine, together with the external application of spices and rubefacients. When all these remedies have failed, I have succeeded in allaying the irritability almost instantly, by a remedy which would not have been "a priori" resorted to in this disorder. I allude to the powdered saccharum saturni. To the use of this article in cases similar to those detailed above, I was first led, by observing its calming effects when used to relieve the tormina, tenesmus, and gastric irritability, occurring in dysentery.

The very successful results of the use of sugar of lead in the obstinate epidemic of the year 1820, has been already detailed in a paper published in the Medical Recorder. It is there stated, that I had even resorted to the use of sugar of lead in colica pictonum, complicated with this excessive degree of gastric irritability; but added that I was not prepared, at that time, to speak with sufficient confidence to recommend its general use. Some editorial remarks are appended to the paper here alluded to, the tenor of which we by no means approve. The editor there condemns the internal use of sugar of lead in dysentery. It having been administered by him, "in one case, a child about two

years old, the discharges were speedily checked, but the patient was incessantly tormented by a painful pressing down of the bowels; much general distress was also experienced by the child, as was evident from the countenance, restlessness, and occasional screams."—Vide *Med. Recorder, for* 1822, p. 657.

With due deference to that editor's opinions, we are under the impression that the symptoms which he attributes to the remedy, are precisely those which characterize the disease under his consideration. Since this period, I have frequently used the saccharum saturni in dysentery, and always with the most desirable results; and the estimation in which I at that time held this remedy, has been frequently confirmed by the testimony of other practitioners, more especially of those of the southern states.

In those cases of lead-colic, to which I have particularly referred above, I have found no remedy so well adapted to the purpose, as the sugar of lead. After having in vain endeavoured to allay gastric irritability by calomel and opium, assisted by the usual remedies, I resort to the use of the following prescription. ℞ cal. ppt. gr. v., pulv. opii. gr. ij., pulv. sacch. sat. gr. iij.—m. ft. pulv.; to be repeated every two hours until relief is obtained; which is generally the case after two or three powders have been taken. Injections of saccharum saturni, with opium, in solution, have also been successfully used for a similar purpose.

I have already administered this remedy with success in bilious fevers of high grade, where excessive irritability of the stomach precluded the internal use of all other remedies. Under similar circumstances, I propose to administer this remedy in *yellow fever*, the next opportunity which presents itself.

In one case of cholera morbus, in an advanced stage, I administered an enema of ℈i. of saccharum saturni, with ʒij. of tincture of opium. By this treatment, once repeated, it appeared to me that the life of the patient was preserved.

After the administration of this remedy in colica pictonum, and when the stomach is calmed, the usual remedies are resorted to. The substances ejected from the stomach, in these cases, consist, for the most part, of vitiated bile, the quantity being at times exceedingly great.

When the bowels have at length given way to the effects of medicine, at times, enormous quantities of feculent matter, with

flatus, are discharged; and, if not moderated, the catharsis would endanger the life of the patient. For this purpose, if pain still remains, I give castor oil and laudanum, or, if the stomach reject this, small doses of spirits of turpentine and olive oil, alternated with laudanum. But, should torpor of the bowels still remain after the violence of the disease has been overcome, I have found a useful remedy in a mixture of castor oil and spirits of turpentine, in the proportion of a table-spoon-ful of the former, to a tea-spoon-ful of the latter. In more obstinate cases of torpidity of the bowels, under these circumstances, I have resorted to the use of croton oil, with signal advantage. This was particularly the case in two patients, who, after recovery from a severe attack of colica pictonum, had a *relapse*, without any subsequent exposure to white lead; having been seized with catarrh from exposure to cold and damp.

I stated, in the commencement of this essay, the peculiar liability of one form of this disease to terminate in paralysis of the extremities, most generally of the fore-arms. One instance only has occurred under my own superintendence; but I have had occasion to treat several cases of this nature which had been under the care of other physicians. These patients finally recovered, with the exception of one, under the use of powdered nux vomica, caustic issues on each side of the nape of the neck, and purging medicines, continued for two or three months.

Notwithstanding the utmost care and attention on the part of the medical attendant, this disease will frequently terminate in inflammation of the intestines; but this is by no means necessarily fatal, provided the attention be attracted in time to this symptom. Post-mortem examinations, at least such as occurred under my own inspection, have invariably displayed mortification of the intestines, provided mania a potu had not supervened and carried off the patient. Four cases only have terminated fatally under my own treatment. Three of these were habitually intemperate; and the other, an ignorant German, unacquainted with the dangerous nature of his complaint, suffered himself to be neglected for three days previous to making application for relief.

From the severity of the disease, together with the use of the necessarily violent remedies, dysentery, with copious discharges of blood, is not unfrequently induced; in which case, no remedy is

more effectual in relieving pain and suppressing the discharge, than the pulverized saccharum saturni, in combination with calomel, opium, and ipecacuanha. Should the blood discharged, after long continued constipation, present a grumous or coffee-ground appearance, it indicates commencing mortification, which for the most part speedily ends in the death of the patient.

In writing the above, I have carefully avoided discussing the various and conflicting opinions of authors, in relation both to the pathology and treatment of these diseases; wishing to confine myself to a record of observations which have been elicited by actual experience. It is unnecessary to add, that I feel by no means satisfied in any of the systems of practice mentioned in the *Dictionnaire des Sciences Medicales.*

ARTICLE IV.—*On Hæmoptysis.* By D. FRANCIS CONDIE, M. D.

THE word hæmoptysis,* would evidently include every hæmorrhage in which the blood is discharged in the act of spitting, whether it proceed from the gums, fauces and posterior nares, or from the respiratory organs, properly speaking. With the view, therefore, to the attainment, as far as is possible, of that precision, so important in medical nomenclature, the term should be understood as being restricted, invariably, to hæmorrhages from the trachea and bronchial ramifications. It is with this application that it will be employed in the present essay.

Hæmoptysis is, undoubtedly, one of the most common forms of spontaneous hæmorrhage; the reason of which it is very easy to understand: for, besides the great amount of blood which constantly circulates through the highly vascular system of the respiratory organs, thereby rendering them peculiarly liable to become the seat of sanguineous congestions, they are, also, from their continual contact with the atmospheric air, subjected, every moment, to the influence of its various, and frequently sudden, vicissitudes; while their agency in the acts of speaking, singing,

* From αἷμα, sanguis, and πτυω, expuo,—sanguinis expuitio.

crying aloud, &c. renders them peculiarly liable to improper and excessive excitement and irritation; especially in those individuals, in whom they are already predisposed to disease, in consequence of mal-conformations of the chest, of incipient phthisis, of previous attacks of obstinate catarrh, or other causes.

Hæmoptysis occurs most frequently between fifteen and twenty-five years of age. Those, however, more advanced in life, are occasionally subjected to its attacks, while it is of very rare occurrence during infancy.

Persons born of parents who have been affected with this hæmorrhage, are said, upon highly respectable authority, to be more predisposed to its attacks than others. It is, also, of more frequent occurrence in subjects of a sanguineous temperament, or in whom the sanguineous system predominates, in those of enfeebled constitutions, and of irritable dispositions, and especially in those who are predisposed to phthisis. The existence of tubercles in the lungs, would, indeed, appear to be among the most common causes productive of hæmorrhage from these organs. In many instances the discharge of blood is found to precede, for even many years, the development of the peculiar symptoms of phthisis; in some, the latter have presented themselves, almost simultaneously with the very first attack of hæmorrhage; while again, in other instances, not the slightest appearance of hæmoptysis will be perceived, until the tuberculous condition of the lungs has existed for a length of time, and the symptoms indicative of phthisis have made considerable progress. On this point, however, we would wish not to be misunderstood. There is not any necessary connexion between the discharge of blood from the respiratory organs, and phthisis; nor is the former, as has been supposed by some,* invariably a precursor of consumption. Many individuals have come under our own observation, who, notwithstanding they had suffered repeated severe attacks of pulmonary hæmorrhage, have, nevertheless, lived to an advanced age, without exhibiting a single symptom that should lead us to suspect the existence of tubercles in their lungs. A similar statement is made by Bricheteau, Andral, Chomel, and others. But according to

* Thus Hippocrates Επι αιμαλος πτυσει, πυη πτυσις—a sanguine sputo, puris sputum. *Aphoris.* Sec. vii. 78.

the first mentioned writer, persons who have laboured for a considerable time under hæmoptysis, become, finally, affected with a species of consumption, independent of the presence of tubercles; examination of their bodies after death, showing that the symptoms of phthisis had been occasioned by a suppuration of the lungs, produced by the long continuance of the hæmorrhagic irritation. It is hardly necessary to add, that phthisis not unfrequently runs its entire course, and terminates in death, without being preceded, or accompanied by a spitting of blood.

Certain trades and professions have been noticed as peculiarly liable to induce the disease under consideration; thus public speakers, especially such, as from their habit of addressing large audiences, are required, for several hours at a time, to exert their voices to their utmost pitch, players on wind instruments, and those individuals whose employments constantly expose them to an atmosphere loaded with fine dust or irritating vapours, are well known to be more liable than others, not only to hæmoptysis, but, also, to various other diseases of the respiratory organs. According to Stoll, taylors are very apt to be affected with a spitting of blood,—and this he attributes, with much plausibility, to the constrained position in which they work, interfering with the freedom of respiration, and thus causing the blood to accumulate in the pulmonary vessels.

The discharge of blood in hæmoptysis takes place, frequently suddenly, and without being announced by any preceding symptoms; a slight cough and the expectoration of a small portion of mucus streaked with blood, or even of pure blood, being the first indication of the disease. It is, however, almost alone in those who have been previously affected with hæmoptysis, that the attack commences in the manner just described: more commonly, it is preceded by certain local, as well as general symptoms, by which the patient is warned of its approach, such as a painful sensation, weight, numbness, or constriction, and more or less of heat, in the whole, or some particular portion of the thorax; sometimes only on one side, at the sternum, or between the shoulders; with these, there is generally some difficulty in respiration, a dry cough, or an expectoration of frothy mucus, and frequently, a saltish or peculiar taste in the fauces. To the foregoing local symptoms, may be joined, a sense of chilliness over

the surface of the body, but particularly of the extremities; lassitude, alternate paleness and flushing of the cheeks, followed by fever, pain or tension of the head, palpitation of the heart, and, for the most part, a hard and accelerated pulse. The blood exhaled into the bronchia, is not always immediately discharged externally; its presence, in such cases, is very commonly indicated by a rattling in the chest and trachea, occasioned by the blood, mixed with air, being agitated in the act of respiration. The difficulty of breathing and the oppression at the chest, is also, much greater than before the blood had been thrown out by the vessels. So long as the hæmorrhagic action of the latter continues, more or less of the rattling in the chest, with the dyspnœa, and the other phenomena, produced by the presence of the effused blood in the lungs, continue to be experienced.

In hæmoptysis the blood is discharged by the mouth, at different intervals. In the greater number of cases, its presence in the bronchia excites a fit of coughing, by which a portion of it is thrown into the fauces, from whence the patient discharges it in the act of spitting. When, however, the hæmorrhage is very profuse, it is discharged from the lungs by a violent, almost convulsive, effort of the respiratory organs, when it gushes, as it were, in torrents, or in nearly a continued stream, from the mouth and nostrils.

The blood discharged is very commonly of a bright arterial hue, frequently combined with mucus, and frothy, in consequence of its admixture with the air inhaled into the lungs. But when the blood is effused to any considerable extent, it is frequently pure, and without any admixture of air; on the contrary, the flow of blood from the vessels being moderate in quantity, it may remain for some time in the bronchia previously to its being discharged externally, in which case it is generally combined with more or less of mucus, of a dark colour and coagulated; this is very commonly the case in the decline of almost every attack of hæmoptysis.

The quantity of blood lost, in each attack of pulmonary hæmorrhage, is extremely variable, one patient discharging but two or three spittings, while another will lose, in a short space of time, many pounds. When the hæmorrhage is to any considerble extent, it produces upon the pulse, the colour of the skin, and

the general strength of the patient, &c. all the well known effects resulting from every excessive loss of blood from the system.

The progress and continuance of hæmoptysis varies, in almost every separate attack. After the discharge of a few mouthfuls of blood, the hæmorrhage may cease, and not again return, until after a considerable lapse of time, while in other instances, the discharge being far more considerable, it may gradually decrease in violence, or continue with little abatement for many days. Similar varieties are observed in regard to its recurrence,—it not returning for years, or being repeated weekly, daily, or even at shorter intervals; frequently without any apparent exciting cause, but more generally, in consequence of some imprudence on the part of the patient, such as taking food or drink of too stimulating a quality, over-exertion, exposure to cold or dampness, extreme heat, a paroxysm of anger, &c.

Very frequently, when the hæmorrhage has ceased, the patient still continues to be affected with a cough, some degree of difficulty in respiration, and an expectoration of mucus, indicating the continuance of irritation in some portion of the pulmonary apparatus. The cessation of the attack of hæmoptysis may, also, be succeeded by all the symptoms of pneumonia, or the phenomena attendant upon phthisis may, very quickly, or by degrees, develop themselves.

It is an important circumstance always to be kept in mind by the physician, that the individual who has experienced one attack of hæmoptysis, is always peculiarly liable to its return at some future period. In some instances it is found to recur periodically; this has been observed to be particularly the case in females who labour under a suppression of the menstrual flux, and in males affected with hæmorrhoids. In the majority of cases, however, the disease returns at irregular periods, and, as we have previously remarked, most generally in consequence of the occurrence of some exciting cause.

Hæmoptysis may be induced by any circumstance, capable of, either directly or indirectly, exciting irritation in some portion of the mucous membrane of the respiratory organs. The ordinary causes are, exposure to a cold and damp atmosphere, the inspiration of very cold or very hot air, of irritating vapours, gases, &c., a considerable muscular exertion in lifting a heavy weight,

insolation, blows or falls upon the thorax, a violent and prolonged exertion of the respiratory organs, in reading aloud, or speaking with energy, violent exclamations, frequent playing on wind instruments, a violent paroxysm of anger, or other intense excitement of the mind. A cause of hæmoptysis of occasional occurrence, is a considerable diminution in the pressure of the superincumbent atmosphere, particularly when an individual, having ascended to a considerable elevation, is placed under the influence of a column of air, much lighter than that which he is destined ordinarily to support.

Various diseases of the lungs, or of some other of the viscera, may favour the production of this hæmorrhage. We have already noticed its frequent connexion with tubercles; the repeated occurrence of bronchial inflammation; a dry and harsh cough, from irritation of the lungs, and certain organic affections of the heart, may, also, concur in its production. A diseased condition of the abdominal viscera may, likewise, in some instances, occasion hæmoptysis; thus Stoll, Hoffman, Latour, and others, relate cases in which the hæmorrhage appeared to be intimately connected with extensive engorgement, and other morbid conditions of the liver, spleen, mesenteric gland, &c. In these cases the hæmorrhage may have been produced, either by the enlarged condition of these viscera, encroaching upon the cavity of the thorax, and thus interfering with the freedom of respiration, or by the irritation under which they labour being propagated to the respiratory organs and exciting in their vessels a hæmorrhagic action. By Andry and Daulioulle we are presented with two cases, in which the hæmoptysis appeared to be kept up by the presence of worms in the intestines. In both, the hæmorrhage ceased upon the expulsion of the worms, after the employment of anthelmintic remedies.

Rupture of one or more blood vessels, debility of the extreme arteries, and an ulceration of the lungs, have been the immediate causes to which hæmoptysis has been referred by the majority of medical writers.

The sudden manner in which many cases of hæmoptysis occur, their immediately succeeding to some powerful muscular exertion, a violent paroxysm of anger, or other intense excitement, and the great amount of blood frequently discharged, have been the

causes which, no doubt, have led to the supposition of this hæmorrhage being dependent upon rupture of an artery. In the present state of pathology, however, conclusions as to the nature of a disease founded upon reasons of so vague a character as those we have just enumerated, will, it is believed, meet with very little respect.

If we inquire in what manner hæmoptysis from a ruptured blood-vessel can be occasioned by muscular exertion, or a paroxysm of anger, it will be replied, that these causes increasing violently the action of the heart, a volume of blood is in consequence determined into the vessels of the lungs, with a force sufficient to produce in their coats a solution of continuity.* But that no such local determination can be produced, in the manner here supposed, must be evident, from the most superficial view of the mechanism of the circulation, and of the action of the heart upon the contents of the arteries; while from the phenomena of disease we learn, that whenever an increased amount of blood circulates through any particular part, it is, in consequence, not of an increase of action in the heart, but of an irritation existing in the vessels of the part, and attracting to them the blood.

In regard to the amount of blood thrown out, we can see no reason from this, to infer the rupture of a vessel. Let any one cite to us a case of the most excessive hæmorrhage, and we can present to him one of simple expectoration or flux of mucus, in which the amount of fluid discharged, shall exceed the quantity of blood poured forth in the former. The fact is, the colour of the blood, its importance to life, and the sensations always excited by the loss of a very small portion of it, are circumstances very apt to mislead us in our conclusions upon this point. It is now satisfactorily ascertained that the vessels of a part, when labouring under irritation, have the power of exhaling blood, in the same manner they do serum or other fluids, and, probably, to as great an extent.

Hæmoptysis from the rupture of a vessel is not, we acknowledge, impossible; ti is, however, we believe, of very rare occurrence,

* That this is the doctrine of the books will be perceived by a reference to Cullen's First Lines—734 to 774 inclusive, and to Good's Study of Medicine, vol. iii. p. 175.

and when it does occur, we suspect that the blood will generally be found effused in the substance of the lungs, and not to be discharged externally. It is to be recollected, that in hæmoptysis the hæmorrhage almost invariably proceeds from the mucus membrane of the trachea or bronchia, a situation at which rupture of a blood vessel very rarely, if ever, takes place. The cases of hæmoptysis upon record, presumed to have arisen from rupture, are extremely equivocal, the presumed source of the blood not being established by the appearances met with subsequent to death. In many instances, indeed, in which a fatal result has occurred, in cases succeeding almost immediate to some violent muscular exertion, the most accurate post mortem examinations have shown that no rupture of any vessels in the lungs had taken place.*

I have opened, observes BICHAT, a great number of subjects who have died during hæmorrhage from the lungs, and on examination of the bronchial surfaces, could never discover the least trace of erosion or rupture of the vessels, notwithstanding I have taken the precaution to wash carefully these surfaces, to allow them to macerate, and to examine them with the glass. M. ANDRAL, who has recently, in the course of his observations upon pulmonary tubercles, paid considerable attention to the morbid appearances in the lungs of those who have died during hæmoptysis, confirms fully the statement of BICHAT; he was able, in no instance, to recognise any other source of the hæmorrhage than the surface of the mucus membrane of the bronchia. Excepting in those cases in which the hæmorrhage was complicated with tubercles, the bronchial membrane presented the same appearances as in simple bronchitis. In some instances, it was pale, or at most presented but a slight rose coloured tint. MORGAGNI mentions the appearances he met with after death, in cases of hæmoptysis, to be, engorgements of the lungs, and tubercles, in the neighbourhood of which, the vessels were dilated. PORTAL relates the case of a young man that had laboured under hæmoptysis for many years, in whom the lungs after death were found to be perfectly sound, but the bronchial glands were engorged and covered with vessels greatly dilated, many of which terminated by open extremities into the cavity of the bronchia.

* A very interesting case of this kind is related by Baumes in his *Dissertatio de hæmoptoe*, 1748.

According to LAENNEC, whose accuracy of observation will not, it is presumed, be called in question, two varieties only of hæmoptysis can arise from rupture of the blood-vessels. The first, when an aneurism bursts into the trachea or bronchia, and the second, when there is a rupture of a vessel into a tuberculous excavation; an event, he adds, which I have already shown to be extremely uncommon. These two species of hæmorrhage are, however, he continues, followed by almost immediate death, and can, by no means, explain the phenomena of a disease of so common occurrence as hæmoptysis.

Of hæmoptysis from ulceration of the lungs, we can say but little, morbid anatomy having presented us with but few direct facts upon which to settle this question. We will merely remark, that in those cases of hæmorrhage from the lungs complicated with phthisis, which have been supposed very generally to depend upon ulceration, the blood has been found upon dissection to have been effused from the mucous membrane of the bronchia, and not from the ulcerated portion of the lungs.

Having very fully expressed our own opinions of the pathology of spontaneous hæmorrhages, in a paper published in the third volume of this Journal, page 236, the foregoing remarks are considered to be all that is necessary on the present occasion. When we consider the causes and symptoms of hæmoptysis, the plan of treatment by which it is most effectually controlled, as well as the appearances discoverable subsequent to death, we are irresistibly compelled to view the disease as dependant upon an irritation of the mucous coat of the lower portion of the trachea, or of the bronchia, in consequence of which irritation its vessels are induced to take on a hæmorrhagic action.

By LAENNEC is described a species of violent and extensive hæmoptysis, or, as he terms it, pulmonary apoplexy, which he presumes to arise from an effusion of blood into the parenchyma or the air cells of the lungs. Examinations after death present an exactly circumscribed induration of some portion of the lungs, of a very dark red colour; when cut into, the incised surfaces appear granulated, and when scraped, there is detached from them a small portion of very dark, half coagulated blood. The indurated portion appears perfectly homogeneous, and presents no trace of the natural texture of the parts, with the exception of the bronchial tubes

and the larger blood-vessels; the coats of the latter being stained with blood. Sometimes the centre of the indurated mass is soft, or filled with a clot of pure blood; two or three of these indurations are sometimes met with in the same lung, and frequently both lungs present them at the same time. They are most commonly met with in the central portion of the lower lobe, or about the middle and posterior part of the lungs. The diseased portions grow pale upon washing, but lose no part of their consistency. The existence of the lesion here described, remarks LAENNEC, cannot be determined by the quantity of blood discharged; the induration may be very extensive, and the expectoration of blood inconsiderable, while a much larger portion may be discharged simply from a hæmorrhagic action of the vessels of the bronchial membrane.

Of the exact nature of the lesion here described, we pretend not to form any positive conclusion; but so far from its being the cause of the hæmoptysis, as the author would appear to imagine, we should conclude from his own description, that the induration of the pulmonary tissue, as well as the discharge of blood by the mouth, are to be referred to one and the same cause, an irritation of the mucous membrane of the lungs. In the immediate neighbourhood of the induration, we are informed that the lung is frequently rose coloured or even red, and that, when the pulmonary engorgement exists to any extent, the mucous membrane of the bronchiæ is almost always found highly reddened and swollen.

Hæmoptysis is generally, and with propriety, regarded as a serious disease; many persons, however, who have been almost habitually subject to a spitting of blood, or who, at least, have experienced repeated attacks of the disease, have, nevertheless, attained to a very considerable age. PLINY refers to the case of a Roman governor, who, under these circumstances, reached his ninetieth year,—a somewhat similar case is related by ZACHUTUS LUSITANUS, while PINEL cites the instance of Grétry, the celebrated musician, who, from infancy until an advanced age, suffered almost constantly from the disease. Cases which succeed to the suppression of the menstrual discharge, or of some other habitual hæmorrhage, are said to be those most exempt from danger. For the most part, also, those attacks in which the discharge of blood is slight, which occur at long intervals, and can be referred evi-

dently to the influence of some exterior cause, in subjects who have no apparent predisposition to phthisis, are but little to be dreaded, generally yielding very readily to an appropriate treatment. Hæmoptysis is seldom, indeed, dangerous from the mere discharge itself, but from its being connected with, or preceding some organic læsion of the lungs.

Called in to treat a case of pulmonary hæmorrhage, we should direct the patient to remain perfectly quiet, and as much as possible in an erect position; all such portions of his clothing as appear to have any tendency to impede the free exercise of the functions of the chest and lungs, are to be immediately removed, while the air of the patient's chamber is to be kept perfectly fresh and somewhat cool: hence, all those persons, who are not absolutely required as attendants, should be withdrawn from it. If the hæmorrhage be recent, to any considerable extent; if it occur in a full, plethoric, or robust habit, or be attended with much sense of weight or pain, with an excited state of the general circulation, and a full, frequent, hard, or contracted pulse, general bleeding will invariably be demanded. In every instance, therefore, in which the above phenomena are present to a greater or less extent, a vein should be opened, and a sufficient quantity of blood drawn off, at once, to make a decided impression upon the symptoms of the case; and if the hæmorrhage be not considerably abated by the first bleeding, or should it subsequently return, the abstraction of blood is to be repeated, provided it be not forbid by the weakness and slowness of the pulse, or the exhaustion of the general strength of the patient. Should, however, the circumstances of the case be such, as not to warrant a repetition of the bleeding from the arm, as well as in those instances in which the symptoms are perfectly local, or where the hæmorrhage occurs in individuals of an enfeebled constitution, cups or leeches to the anterior part of the chest, or between the shoulders, are to be substituted. In most of these cases it is probable that cupping will be found preferable to leeches. The former, besides depleting from the capillaries, produces likewise, at the part upon which it is performed, a degree of irritation which attracts to it an afflux of blood, that aids considerably in diminishing the irritation and congestion of the pulmonary capillaries, by which the hæmorrhage is maintained. Even when the circumstances of

the case are such as forbid the loss of any quantity of blood, decided benefit will be derived from the application to the chest of dry cups; or, probably, instances may occur, in which cupping, both with and without scarifications, may be employed advantageously, at one and the same time. Of course, on these points no precise directions can be given, it being impossible to anticipate every circumstance by which individual instances of the disease may be modified.

As a substitute for direct depletion in hæmoptysis, the employment of digitalis has been recommended. To arrest an attack of extensive pulmonary hæmorrhage, the remedy is, however, totally inadequate; it is always some time before its effects upon the circulation are perceived, while in its operation it is confessedly one of the most uncertain articles of the materia medica. To cases of the disease that have somewhat of a chronic character, the digitalis may perhaps be better adapted: in regard to it we can say nothing from our own experience, having seldom or ever employed it.

Subsequently to the first bleeding, some saline cathartic is to be administered, as well to relieve the bowels from the irritation of retained fœces, as, by its impression upon the vessels of these parts, to produce an increased flow of blood towards them, with the view of diminishing the congestion in the lungs. The cathartic should, however, be given in divided doses, so as only to keep up a gently laxative condition of the bowels, and never to the extent of active purging.

The employment of the nitrate of potass in cases of acute hæmoptysis, after bleeding has been carried to a proper extent, is recommended by most writers, and it is no doubt a remedy deserving of attention. It may be given dissolved in cold water, to the extent of ten grains every three hours. By some European practitioners, it has been administered in much larger doses; but the very great irritation of the stomach we have seen occasionally produced by the too free administration of nitre, would cause us to hesitate before we imitated or recommended this practice. In many cases good effects will be derived from combining with the remedy, minute doses of tartarised antimony. But an inconvenience sometimes resulting from this combination, is, that the emetic tartar even in the smallest doses, will, with many stomachs,

excite vomiting; a circumstance which we are persuaded should always be guarded against in the disease under consideration. Emetics have, it is true, been themselves recommended in the treatment of hæmoptysis. Dr. Bryan Robinson, was, in his day, a strenuous advocate for their employment. He accounts for their good effects, by a constriction, which he presumes they occasion in the extreme vessels throughout the system. Whatever benefit may result from the nausea induced by emetics, we are convinced that the act of vomiting would rather increase, than diminish the flow of blood in cases of simple hæmoptysis. Cullen informs us, that he was induced to make trial of them, upon the recommendation of Robinson; but that in one case they produced so considerable an increase of the hæmorrhage, that the possibility of a similar occurrence prevented him from their further trial. Whether there may not occur certain cases of symptomatic hæmoptysis in which emetics would be beneficial, we are not prepared to determine. Stoll describes a species of bilious hæmoptysis, as he terms it, occurring without fever, but with the most decided gastric symptoms; in which he states, that he has frequently known a single emetic put a stop to the hæmorrhage.

Of the beneficial effects resulting from blisters applied to the thorax, when the symptoms of hæmoptysis persist subsequently to free blood letting, &c. there can be little doubt, notwithstanding their proscription by certain practitioners. Chomel, quoting Mertens, speaks decidedly in their favour, at this period of the disease; and Dr. Currie of this city, assures us, that, when the hæmorrhage has been of some days continuance, he has frequently known it to be speedily arrested by a blister to the chest. Of the good effects of blistering in hæmoptysis, when properly timed, we can ourselves bear ample testimony.

In the early stage of the disease, after bleeding, the application of cold to the thorax and arm pits, by means of cloths wrung out of cold water, or cold vinegar and water, is recommended by many respectable writers; nevertheless, we cannot but consider the remedy as one, the propriety of which, is extremely doubtful, particularly when it is continued for any length of time. We should apprehend from it, indeed, the production, not unfrequently, of catarrhal symptoms, or even of pulmonary inflammation: in

extreme cases, however, the evidence in its favour is such, as would appear to warrant its employment.

The internal use of cold water, has also been proposed. It was employed by De Haen, and, we are assured, with success. Hoffman, likewise, greatly extols it, and Pinel and Bricheteau recommend its use, in conjunction with the external application of cold air, by reducing the temperature of the atmosphere in the patient's chamber; in summer, by the free admission of the external air, and by sprinkling the floor with cold water; in winter, by allowing little or no fire, and by slightly covering the patient with clothes. To a certain extent, this practice may, with great propriety, be imitated.*

In those cases of hæmoptysis in which, after the free use of the lancet, of refrigerants, &c., the hæmorrhage still continues, or in those in which general bleeding has not been thought admissible, we are directed, particularly by the French practitioners, to produce a revulsion from the lungs, by plunging the hands and feet of the patient in hot water, rendered somewhat more stimulating by the addition of mustard, or salt, &c. Of the propriety and frequent efficacy of a similar procedure, there can, we conceive, be no doubt.

By Dr. Rush and other practitioners of our own country, common salt in fine powder, in the quantity of a tea-spoon-ful, slowly swallowed, has been said frequently to put a stop to hæmorrhage from the lungs: we have seen it repeatedly tried, however, without the least good effect, nor do we consider it a remedy upon which much dependance is to be placed. It is noticed here merely on account of the popularity it has attained in this city, from the recommendation of Rush. We are scarcely ever called to a case of hæmoptysis, in which it has not been previously exhibited, either at the instigation of the patient or of his friends. Were, indeed, the effects that have been ascribed to the article, very generally to result from its employment, the physician would seldom have to prescribe for a case of this disease.

When hæmoptysis is attended with much cough, after due depletion, the following prescription will be found not only greatly to relieve this troublesome symptom, but, also, to produce a

* Vide Gervias de "usu aquæ frigidæ in hæmoptysim."

beneficial result upon the hæmorrhage. ℞ Pulv. ipecacuanhæ gr. vj.—viij., pulv. opii, gr. ij.—iij., gum acaciæ ℈j. m.; for eight powders, one of which is to be taken every three hours.

The efficacy of ipecacuanha, by itself, as a remedy in this disease, has been highly spoken of, particularly by the German and Danish physicians. In the Acts of the Medical Society of Copenhagen, are a collection of facts by Dr. Asheim, in proof of the good effects of the remedy in pulmonary hæmorrhage. This writer directs it in combination with sugar, in doses of two-thirds of a grain every hour. We are convinced, however, that when repeated at such short intervals, it will be found almost invariably to excite vomiting. In the prescription formerly mentioned, we have employed it with the best effects. When the patient is much disturbed by a cough during the night, we have experienced great advantage from giving, at bed time, a pill composed of a grain or two of opium, with one of ipecacuanha.

Notwithstanding a judicious employment of the remedies already recited, if the hæmorrhage still continues in any considerable degree, the acetate of lead, combined with opium and ipecacuanha, will very generally succeed in arresting it, when dependant upon simple irritation, and in moderating it, when connected with organic disease of the lungs. Three to five grains of the acetate of lead, combined with a quarter or half a grain of opium, and one of ipecacuanha, may be administered every three hours, or at shorter intervals.

In favour of the sugar of lead as a remedy in hæmoptysis, as well as in every variety of internal hæmorrhage, the annals of our science are replete with ample evidence. "I have exhibited the acetate of lead," observes the late professor Barton, "generally in combination with a pittance of opium, or of ipecacuanha; and seldom have I been disappointed in my expectations of benefit from the remedy." Heberden, Monro, Williamson, Hill, Reynolds, and several German practitioners, have, also, borne equally favourable testimony of its efficacy.

In hæmoptysis the diet of the patient is a subject deserving of minute attention: it is in vain to attempt the removal of the hæmorrhage, if the irritation be constantly kept up by too much, or improper, food. Under those circumstances in which active depletion has been directed, a nearly total abstinence from food will

be required; the patient being allowed little else than lemonade, or barley, rice, or gum water, slightly acidulated, taken cold, and in moderation. Under other circumstances, the diet should be of such a quality, and so restricted in quantity, as to guard against even the possibility of its increasing or exciting the hæmorrhagic irritation. With these precepts in mind, the judicious physician will be led at once to a correct decision in regard to the articles of food to which the patient is to be confined.

By the plan of treatment which has been now detailed, we are persuaded that most cases of simple hæmoptysis will sooner or later be arrested. We pass by in silence, a long list of astringent and tonic remedies, that have been recommended by different writers for its cure. When the hæmorrhage is attended with fever, or occurs in the young and robust, it is confessed on all hands that their employment would be improper; and if the pathology of the disease which we have given, be correct, it will be perceived that, even in the most feeble subjects, there exists a local irritation of the lungs, which the employment of tonics and astringents cannot fail in most instances to increase.

In the absence of the hæmorrhage, we are to endeavour, by every means in our power, to prevent its return in future. To effect this the patient is carefully to abstain from all the circumstances which have been enumerated as exciting causes of the disease: he is to be nourished by a simple, unirritating and moderate diet; to take regular and gentle exercise on horseback, by sailing, or on foot; and, when much debilitated, to wear flannel next his skin. When the hæmorrhage has arisen from, or been connected with, some organic læsion of the lungs or other viscera, we are, of course, to endeavour, by an appropriate treatment, to restore these parts to their healthy condition.

ARTICLE V.—*Case of Lumbar Abscess, connected with Ascites, occurring in the Baltimore Alms-House.* By THOMAS H. WRIGHT, M. D., physician to that institution.

MARY SCHYLAR, aged 22, was admitted into the house on the 7th of May, 1827; her general health much impaired; countenance

pallid; great debility; pulse frequent and small; some intumescence of the abdomen; slight œdema of the legs; catamenia suppressed; supposed by herself to be pregnant; and had gonorrhœa.

Shortly after being relieved of gonorrhœa, she complained of pain in the right hip, with some swelling of the part, a sense of soreness upon pressure, pain and difficulty of motion in the right limb, and some increase of fever. An epispastic to the hip removed the pain, and by the use of nitrous and antimonial medicines, the fever was abated considerably, though never entirely removed. A few days after recovery from pain and swelling of the hip, considerable tenderness was experienced in the right side, about the hepatic region, which, like the pain of the hip, yielded in a few days to the effects of an epispastic and diaphoretics.

Some complaint being made, five or six weeks after admission, of weight and pressure in the uterine region, examination "per vaginam" was practised, in order to ascertain the state of the uterus and determine the presumption of pregnancy. The uterus being found in its proper situation, and of the size common to that organ, the patient was pronounced not pregnant, and her condition attributed to chronic visceral derangement, with tendency to abdominal dropsy. The belly was now more tumid than natural; with some degree of fluctuation on percussion, and sensibility to pressure over the abdomen, especially about the hepatic region.

From this time the patient underwent a variety of treatment; chiefly such a union of the alterative, aperient and tonic plan, as seemed adapted to existing circumstances, and calculated to counteract the apparent tendency to the asthenic form of dropsy. For some weeks there was very little obvious change of her general state; the abdomen rather increased in volume, but was not greatly distended; the anasarca of the lower extremities continued; the left more œdematous than the right. The pulse always frequent and small, though not remarkably hurried: little or no febrile heat; thirst not unusual, and no complaint of particular pain in any part of the body. After the affection of the hip was removed, there was no pain or difficulty of motion of the lower limbs, the patient could lie on either side, and could sit up, and occasionally walk about the ward, though the power of exertion and motion was necessarily much restricted by general debility.

The condition of the patient varied but little, from the middle

of June to the latter part of July, at which time the signs of constitutional failure became more manifest and decided; the intumescence of the abdomen was sensibly augmented, accompanied by great prostration of strength, more frequency and feebleness of pulse, and some hurry and labour of respiration after efforts to move or talk; and now, for the first time, was perceived some degree of cough, which, if existing at all in the former part of her illness, was so slight as to have excited no attention on the part of the patient or her attendants.

The symptoms denoting a serious waste of the vital energies, now became every day more obvious and urgent, and the unfortunate patient sunk exhausted on the 21st of August. One circumstance, occurring in the progress of this case, has been omitted in the general description of symptoms, as deserving particular notice, from the peculiar relation which it was afterwards discovered to hold with the true nature of the principal morbid condition, disclosed by "post mortem" examination. Two or three weeks prior to the death of the patient, she complained of particular soreness and sensibility constantly present at one spot in the right iliac region, and mentioned the existence of a tumour at the point referred to as the seat of pain. On examination, an unusual prominence was evident immediately below the superior spinous process of the ilium. The tumour was small, tense, and somewhat painful to the touch, without evident marks of inflammation, communicating, on pressure, a sense of elastic resistance from fluid within; which seemed to present either directly through the tendinous fascia of the descending oblique muscle, near its lower border, or, having passed under the margin of the transversalis, to press forward the integuments, and formed a tumour over and upon the oblique fascia (Poupart's ligament,) just below the anterior superior spinous process of the ilium. The tumour was noticed as remarkable, and its resemblance to an occasional (though rare) presentation of the matter of lumbar abscess, was mentioned on its examination; but taken in connexion with the state of abdominal dropsy and general anasarca, it was thought possible that the fluid accumulated in the cavity of the abdomen might point, or present, in the manner described, in consequence of particular relaxation, or diminished resistance of the walls of the abdomen at that point. On subsequent inspection of the

tumour, the fact that it was equally prominent, tense, and resisting in every position of the body, was noticed, as indicating the probability of an encysted state of the fluid pointing at that part, with such adhesions to the abdominal muscles within, that the latter had become involved as part of the sac or cyst in front, and the external tumour thus formed or presented from the continual gravitation of the fluid in that direction.

Dissection.—On raising the external oblique muscle from the spine of the ilium, and dissecting the fascia towards the pubis, an opening was made into the cavity of the tumour, just described, from which purulent matter flowed in a full stream; and it was now evident that the tumour had constituted the depending and prominent point of a great abscess. From the diseased state of the parts at which the matter passed out, it was difficult to determine the exact, original point of its escape.

A ragged opening, large enough to admit a finger, communicated, at the time of dissecting, with the sheath of the femoral vessels; so that the artery, nerve, and vein, lay on the pubal side of the sinus, or track, through which the matter presented externally; the edge or border of POUPART'S ligament was somewhat indented or wasted away, by ulceration, near its pubic attachment: a quantity of matter had passed down by the sides of the femoral vessels, towards the insertion of the psoas and iliacus muscles. It seems probable that the matter first passed out below the margin of the transversalis, on the external or iliac side of the femoral vessels, and afterwards communicated directly with the sheath of those vessels by ulceration of the intervening iliac fascia, and cellular substance. The copious flow of matter, and the direction whence it issued, disclosed the existence of lumbar abscess; and upon slitting up the abdominal walls, a large cyst or sac was discovered, occupying the whole of the right iliac region or cavity, and extending from the deepest concave surface of the loins, to which the sac was firmly attached, down to its outlet at the top of the thigh. The sac was rounded and prominent in front; and, before part of the matter had escaped from the opening made in dissection, the sac must have presented a somewhat regular tumour, occupying the whole iliac, and part of the abdominal space of the right side.

When the sac of the abscess was partly slit up from the open-

ing at the groin, it was discovered that there were two separate and distinct abscesses; one directly over and upon the other; each having its own proper cyst without any communication between the two. The inferior abscess, being emptied of pus, presented a cavity extending from the top of the thigh to the crus of the diaphragm, with some few bands or tendinous slips (the remains of the wasted psoas) standing across the cavity. The hollow space (bed of the abscess) was also traversed by an irregular net of blood-vessels, and by the nerves from the lumbar vertebræ, which run across the iliac region, to be distributed as the superficial or cutaneous nerves of the front and outside of the thigh. On all those vessels and nerves running through the abscess, a good deal of rough, flocculent deposit had formed, giving them a thickened and rough appearance. The lumbar vertebræ, within the limits of the abscess, were not obviously diseased, farther than by the signs of chronic inflammation of the periosteum and ligaments; that is, the bodies of the vertebræ were not affected by caries, but the transverse processes of two of the vertebræ were rough and bare at the points, and broke down easily on pressure.

The matter of this abscess was of a uniform, pale yellow or straw colour, consistent, inodorous, without any loose flocculent masses, or coagula of blood; in short, nearly the pure homogeneous fluid of common suppuration: the quantity, perhaps three pints.

The superior abscess, the separate cyst or sac of matter lying above and upon the head of the other, (the true lumbar abscess,) contained two or three pounds of greenish-yellow pus, perfectly homogeneous; its situation and character were considered very remarkable and of difficult explanation, until the question was asked by a gentleman present at the dissection, "What has become of the right kidney?" It was then obvious enough, that this superior distinct sac of matter, was the right kidney, degenerated into an abscess; the outlines of the sac still preserved distinctly the kidney form; the whole interior structure of the gland was melted down, and the sac or cyst formed of the thickened "tunica propia" of the kidney and the reflected peritoneum, united by adhesion. The cyst was easily separable into two laminæ, corresponding with those two coverings, and was united, over its whole inferior surface, with the sac of the true lumbar abscess,

on which it lies. The interior of the sac was very smooth, and presented three separate "sacculi" or cavities, apparently dilatations of the cells, (botylæ, infundibula,) in which the "tubuli uriniferi" terminated. That this abscess commenced in the centre of the kidney, and was formed in the manner suggested, was rendered probable, also, by an examination of the left kidney; which was greatly enlarged, and exhibited a small quantity of matter deposited in the cells, behind the pelvis.

Besides the very extensive abscess existing in this case, dissection disclosed a variety and extent of morbid degeneracy seldom occurring in the same subject, and calculated to excite astonishment that life could be so long maintained amidst such extensive impair and ruin of so many and so important structures. It will be remembered, that this case was regarded and treated as one of chronic visceral derangement of the liver, spleen, &c., complicated with abdominal dropsy. On opening the peritoneal cavity, it was found filled with the common serous infusion, constituting dropsy of the abdomen. The liver was greatly enlarged, of a dark chocolate colour, with numerous bands of firm adhesion to the diaphragm, spleen, stomach, &c.; the convex surface of the liver was studded with dense patches of effused lymph, and some vesicles containing serum; its interior structure, dense, and very hard from great congestion. There was no appearance of abscess.

The spleen was enlarged to a very great size, with many strong adhesions to the diaphragm and adjacent viscera; like the spleen, it was very dark, and formed a dense firm mass throughout: the long axis of the spleen presented down the iliac region, its inferior extremity approaching the crest of the ilium.

The kidney of the left side, it has already been remarked, was greatly enlarged, and its tendency to abscess was manifested, by a small collection of matter in its ducts near the pelvis.

When the thorax was opened, the pericardium presented itself distended by fluid, (hydrops pericardii,) containing, by conjecture, more than a pint of water. The heart was of large size, but apparently sound: its interior was not examined.

The sac of the pleura, on the left side, was filled with water; (hydrothorax of the pleura pulmonalis;) and when cut open, the interior of the sac was studded with productions or points, very

white, much resembling those of the papillæ seen, after maceration, on the villous coat of the stomach of brutes. Many of the eminences within the sac of the pleura, were half an inch in length; on its external (costo-lateral) surface, the sac adhered firmly to the pleura costalis, and the latter throughout the ribs and intercostal muscles.

The left lung, lying macerated in water, was so wasted, thin, and changed, as to present little appearance of pulmonary structure when drawn out of its sac; its posterior part, near the root, presented something of the pulmonary cellular, or tubular character, and when cut into in many places, pus oozed out freely from every point; not from cysts, abscesses, or tubercles, of which there was no appearance, but from all the divided cells, or tubuli of the lungs.

The right pleural sac contained no water; the lung, rather small, exhibited externally nearly the natural appearance. When cut open in various places, matter flowed out of the divided cells or tubes, as from the diseased lung on the left side. The dissection was prosecuted no farther.

Many features of this case seem extraordinary, when viewed in connexion with the circumstances displayed by dissection. That both a great lumbar and renal abscess should exist with so partial signs of such extensive organic destruction, is very remarkable. Neither the frequent chills, the deep seated pain of the loins, the great numbness at the top of the thigh, with immobility of the limb, which are described as characteristic of the formation of lumbar abscess, attended the disease in the present instance in any appreciable degree. Except the pain and swelling about the hip, of two or three days' continuance, the patient complained of no pain so great as to cause particular inconvenience. The back was not referred to as particularly painful; and throughout her illness, she possessed the use and movements of the right limb equally with the left, notwithstanding the psoas and iliac muscles were wasted by suppuration. It is possible, and indeed probable, from the extensive destruction of the parts, that both abscesses had formed prior to the admission of the patient into the Alms House; hence the signs proper to the early or forming state, had passed by. Still it is surprising that such abscesses, in their more chronic state, should have involved so little distress of feeling, or

loss of power and motion, in the parts affected by the disease; and equally strange, that the constitution should have manifested such partial and tardy sympathy with such serious devastation of structure.

It may be farther remarked, that the character of this abscess was somewhat peculiar in regard to the quality of the contained fluid. The matter was a uniform, consistent pus, without either the flocculent, curd-like masses, or the coagula of blood which generally abound in lumbar abscesses. The tumour in the groin in this case, by the gravitation of the matter, did not at all recede in the recumbent posture of the patient, and could only be partially diminished by firm pressure. This, perhaps, in the present instance, was partly the effect of pressure on the abscess by the water in the peritoneal cavity; but in all cases of psoas abscess, which I have seen presenting at the same point, i. e. near the spine of the ilium, the external tumour remained the same in all postures, and could scarcely be repressed. This fact is opposed to the assertion of writers, that a recession of the tumour in the recumbent posture furnishes an important diagnosis in lumbar abscess.

The sense of oppression, difficult respiration, and inability of lying fully recumbent, which are said to distinguish hydrothoracic affections, were wholly absent in this case. Although the patient laboured under the formidable complication of dropsy, both of the pericardium and of the sac of the pleura, she could lie equally well in every posture, and her breathing was free from any peculiar embarrassment until almost the last moments of her life: and notwithstanding one lung was nearly annihilated, and the other greatly diseased, a slight occasional cough was the only indication of pneumonic affection. Upon the whole, it may be said, that this case strongly illustrates the difficulty of detecting, during life, the exact seat, nature, and extent of visceral disease. The rules of diagnosis furnished by writers for the discrimination of such affections, were nearly all contradicted by the facts disclosed by dissection in the present instance.

This case establishes a question in pathology, which has been the subject of some controversy and discussion; it proves the possibility of purulent collections in the lungs, independent of true abscess formations; for purulent matter abounded in every part

of the lungs, yet there was no appearance of vomicæ, suppurating cysts, or tuberculous degeneration; as the matter flowed from the common cells or bronchial ramifications.

The diseased kidney described in the foregoing account, is in the possession of Robert Macky Dunbar, formerly of the Baltimore Alms House, and now a student in this city. The history is communicated to us with the concurrence of Dr. Wright.

Editors.

Article VI.—*Case of Gouty Inflammation cured by Vaccination over the diseased part.* By D. Theodore Coxe, M. D.

As every thing connected with *Vaccination* has lately been considered of importance, and as even isolated facts may tend to fix the still unsettled state of public opinion in regard to many of its phenomena, I record the following case as interesting in several respects.

A lady of hereditary gouty diathesis had been inoculated for the small pox some fifty years ago, and suffered so severely from the disease, that her life was several times despaired of; she eventually, however, recovered at the expense of a pretty considerable pitting, and the scar upon the inoculated spot is nearly the size of a quarter of a dollar. Some time since, I was requested by her to vaccinate her servant girl, which I did, and successfully. She was herself labouring at this time under a severe attack of *gout* in her right wrist, which was swollen and extremely painful, her system being feverish, &c. I inserted, with her permission, a portion of the virus into the affected part, with the view of ascertaining whether she could take the vaccine disease, and if so, what effects it would produce upon the gout. Somewhat to my surprise, and greatly to my satisfaction, she not only had the genuine disease, but the swelling and pain immediately left her arm; and long before the scab (which by the way was *green*) had dropped off, she was as well and as comfortable as she had ever been in her life. Several physicians and students of medicine requested and obtained a sight of the arm, and all acknowledged it to be an interesting case. The cicatrix remaining is of the genuine, porous kind.

ARTICLE VII.—*Description of a disease which occurred in the Pennsylvania Institution for the Deaf and Dumb.* By G. B. WOOD, M. D., Physician to that Institution.

IN the spring of the year 1824, a complaint prevailed among the children of the Pennsylvania Institution for the Deaf and Dumb, which, in the circumstances of its origin, and the character of its symptoms, presents some considerations that render it, perhaps, not unworthy of being recorded.

At that time, the institution was situated in a building, which, though as well adapted to the purpose as any then attainable, was, however, quite inadequate to the comfortable accommodation of so large a family. The lodging rooms were small and incapable of proper ventilation; and their insufficient number rendered it necessary that each of them should be occupied by at least four of the children. The yard also was inconveniently small; and the scholars, therefore, as they could not be permitted to ramble unattended through the streets of the city, were deprived, in great measure, of that vigorous exercise, which, in the young subject, is peculiarly requisite for the production of firm health and strength of constitution. This inconvenience operated with more than usual disadvantage upon the children who were thus necessarily confined; for, coming, as they chiefly did, from the country, and most of them from situations in life which exposed them to much bodily exercise, they felt the effects not only of the absence of this essential stimulus, but of its deprivation.

To the debilitating influence of confinement upon their constitutions it is probably attributable, that among the inmates of the institution for the deaf and dumb, during the time they occupied this situation, a larger proportion than ordinary became the subjects of disease. In the same way we may account for the fact, that their complaints were seldom accompanied with a very high degree of excitement. Protracted remittents of the typhoid character, and disorders dependent upon derangement of the digestive organs, were of frequent occurrence; and, generally speaking, the inflammatory diseases which made their appearance, required a less active course of depletion than among children of the same age under ordinary circumstances.

At the time of the occurrence of the complaint which forms

the subject of this paper, a peculiarly disagreeable and unhealthy condition of the house was added to its more permanent inconveniences. The privy had been formed by simply partitioning off a portion of the cellar; and its contents, which had been accumulating for a long time, were supported on one side altogether by a feeble wall of brick. Through this they had, by their pressure, forced a passage, and inundated, of consequence, the neighbouring parts of the cellar. The air of the whole house was thus contaminated; and its offensiveness was immediately perceived upon entering the outer door.

The appearance of the disease was preceded by a long spell of unusually warm, damp, and close weather; which had the double effect of rendering the exhalations of the privy more active, and of diminishing, by its own immediate operation, the energies of the system. So warm was the atmosphere, and so fully saturated with moisture, that, on passing into the streets, a sensation was experienced almost equal to that produced by entering a vapour bath. This weather would have operated injuriously on the health, under the most favourable circumstances; how much more so when combined with noxious effluvia, and acting upon constitutions which other causes had prepared for the reception of disease! Accordingly, cases were observed in the city, analogous to those which occurred in the institution: but while the former were few and scattered, the latter amounted to more than half the number of the scholars. There were, in all, about sixty inmates, including teachers, pupils, and servants; and of these, at least thirty were more or less severely affected.

The subjects of the disease were of various ages, from little beyond infancy to middle life; but, among the adults, the proportion of cases was much smaller than among the children, owing, probably, in part, to the greater susceptibility of the latter class, but chiefly to their more frequent and longer exposure to the morbific cause; for, while the teachers, matron, and servants were lodged in the upper chambers of the main edifice, and consequently, as far as possible from the source of the effluvia, the pupils were necessarily placed in a range of apartments so situated, as to render the exclusion of the noxious air of the cellar impracticable.

Though the symptoms in the different cases were such as clearly to indicate an identity of nature in the disease, yet in the

degree of violence there was much diversity; and a gradation was observable, from the mildest affection, scarcely attracting notice, and demanding little or no medical interference, up to the severest and most alarming.

The general character of the complaint was that of fever, with more or less inflammatory determination to the chest. In its moderate form, it began with chilliness, and those other symptoms which usually usher in a slight febrile paroxysm. Then came heat of skin, accelerated pulse, loss of appetite, and moderate head-ache; accompanied, after a short time, with cough and expectoration, but without coryza, or any affection of the nostrils or throat, such as ordinarily marks the commencement of catarrh. In these cases, the patients, though not confined to bed, exhibited much languor and listlessness, with a total indisposition to exertion, either mental or bodily, lying about on the chairs and benches, and paying little or no attention to affairs going on about them. In less than a week, the fever generally disappeared, leaving behind it no other trace of the complaint than a loose cough; which, in most instances, subsided spontaneously, or readily yielded to very gentle treatment.

The severe cases uniformly commenced with a distinct chill; and the febrile re-action which ensued, was often considerable and distressing. The pectoral affection, however, was not immediately experienced. At first, indeed, the case might have been mistaken for a common remittent; but generally, before the conclusion of the second day, sometimes so early as within the first, the patient began to complain of uneasiness in his breast or side, which, with the severe cough that accompanied it, afterwards became the prominent feature of the complaint. The cough was marked, at its very commencement, with free expectoration. The matter discharged varied with the force, type, and period of the disorder. In the more active cases of inflammation, it was at first almost pure blood, of a bright, florid colour; in those which exhibited a disposition to run into a low state, though still evidently sanguineous, it was dark and apparently decomposed; when the symptoms were milder, it consisted chiefly of mucus more or less tinged with blood. During the progress of the disease, the expectoration gradually changed its character; becoming first of a brownish or chocolate colour, then gradually lighter, and

ultimately of a yellowish-white, in which state it was considered as a mark of approaching convalescence. In its varying appearance, it afforded one of our best prognostics, and was always carefully examined.

The sensation in the breast did not appear to be the acute pain of pleuritis or pneumonia; but rather that general uneasiness, stricture, and oppression, which indicate an inflammation, less of the pleura or substance of the lungs, than of the mucous tissue of the bronchia. It was sometimes exceedingly distressing, attended with a hurried or laboured respiration, and great general restlessness. Occasionally, however, sudden and severe pains, resembling those of violent pleurisy, would shoot through the sides, and up to the shoulders, so exceedingly acute, that the patient, though dumb, would scream out as if under the knife of a surgeon. But they were evidently neuralgic, and seated not within the cavity of the chest, but in the muscles exterior to it; for they were sometimes observed to extend to the small of the back, and in more than one instance attacked the extremities. They moreover occurred at all periods of the complaint, after as well as before depletion; were seldom speedily or effectually relieved by bleeding, but always gave way to the internal use of opium and ipecacuanha, combined with the application of external irritants, as hot spirits of turpentine, or mustard, to the part affected.

There was always more or less disorder in the alimentary canal and its appendages. In some instances, the stomach was exceedingly irritable, throwing up bilious matter in considerable quantities, and of various shades of colour. The alvine evacuations were, without exception, of an unhealthy character, being dark coloured and offensive. In one or two cases they resembled in consistence the black stools of fatal yellow fever; in others, they were comparable to nothing so exactly as the mould from decayed leaves, which is often to be seen in the waters of low wooded grounds; in others again, they were a uniform liquid, like molasses and water. Their return to a natural condition, was hailed as a favourable occurrence, though not always a signal of immediate relief to the patient.

The febrile symptoms continued, with various intensity, throughout the complaint. The pulse, always frequent, was seldom possessed of much tension. The tongue was covered with a coat of

fur; which was sometimes thin and white, sometimes thick with a tinge of yellow, sometimes of a brownish colour, and in a few cases, dry and dark, as in typhus. Delirium, and severe pain in the head, though not frequent, were of occasional occurrence; and in one case, the local affection appeared to have been transferred altogether from the lungs to the brain. The delirium usually characterized by muttering, attended the typhous form, into which the complaint sometimes degenerated. In these little mutes, however, no motion of the lips, nor sound of the voice, was observable; the wandering of the mind, and the debility of intellect, were marked by feeble attempts to spell in their usual way by manual signs, while one accustomed to their motions, might readily perceive, that their words were frequently but half formed, and with little or no mutual dependence, like the muttered sounds which escape those who, in a similar condition of the system, have the faculty of articulation. The fever was generally attended with exacerbations and remissions, similar to those of our autumnal endemic; and in a few instances in which it survived the local affection for several days, it was not distinguishable from an ordinary remittent. The duration of the complaint, in its severer forms, was never less than a week, often extended to two or three weeks, and once, at least, exceeded a month.

As to its nature, a few words will embrace all that need be said. The more violent cases bore, in their general aspect, a strong resemblance to that form of pectoral inflammation, which is usually known by the name of *bilious pleurisy*, or of *bilious pneumonia*, or in its low type, of *typhoid pneumonia*. There were, however, several peculiarities. The early occurrence of free expectoration, and the nature of the local sensations, which, except in the instances of muscular pain before alluded to, were seldom very acute, pointed to the mucous tissue of the bronchia, as the principal seat of the inflammatory action; nor do I believe, that either the substance of the lungs, or their investing membrane, was *materially* affected. It is true, that among the inmates of the asylum, I had no opportunity of verifying my opinion by the evidence of dissection; for happily the cases were all brought to a favourable termination; but about the same period, an instance of disease very similar in its character, came under my notice out of the institution; which, being complicated with the morbid ten-

dencies of the puerperal state, resisted the means of cure that were employed, and gave me a chance of inspecting the condition of the lungs after death. The pleura, in this case, exhibited no vestiges of recent inflammation; a portion of one lobe of the lungs appeared to be the seat of sanguineous engorgement, without ulceration, suppuration, or change of structure; but the evidences of a severe bronchitis were presented, as well in the suffused appearance of the mucous membrane, as in the abundant yellowish secretion which filled the tubes themselves. But, whether the pectoral affection was simple bronchitis, or bronchitis complicated with pulmonary inflammation, this much seemed to be certain, that it was a mere accessary to the complaint, and did not constitute its basis, or its essence. For, independently of the fact, that in two cases, the inflammation took other directions, in one, to the head, in the other, to the bowels, it was proved to be altogether secondary by the precedence, for more than twenty-four hours, of the febrile symptoms. The disease appeared to me to be idiopathic fever of the remittent character, arising from miasmata generated within the building, and complicated with bronchial inflammation; the result probably of a predisposition of body derived from the peculiar condition of the atmosphere. I am aware, that in advancing this opinion, I am subjecting myself to the derision of the omniscient modern French school of medicine; which, in the antecedent fever, would perceive a simple gastritis, or gastro-enteritis, and in the affection of the chest, a very natural extension of inflammation from the mucous lining of the alimentary canal, to the analogous structure in the bronchia. My vision, however, has not yet become so clear; and I still continue to consider our ordinary fevers as a complication of disordered actions, probably commencing in the nervous system, but depending as little upon the accompanying irritation of the stomach, as upon the equally constant derangement in the cerebral, the circulatory, the cutaneous, or the general secretory function. But as this paper was intended to be practical, I shall omit further speculation, and proceed to a detail of the treatment.

It is here proper to remark, that in the management of these cases, every facility was presented, and all auxiliary means afforded, which the practitioner could possibly desire. The disease was usually seen and encountered in its incipient stage; every

measure proposed was carried fully and faithfully into effect, and the general comfort of the children watched over by the matron, with a care and tenderness which were equalled only by her diligence or skill as a nurse; the patients themselves, taught to place the most unbounded confidence in those to whose charge they were committed, not only submitted without a murmur to whatever was deemed adviseable in the way of remedy or restriction, but exercised a faith in the efficacy of the means employed, which, probably, contributed to insure their favourable influence. Another advantage of no little value was possessed in the assistance of my friend Dr. EMLEN; who being associated with me in the medical superintendence of the institution, though the present was not his term of attendance, cheerfully afforded his counsel in consultation.

In the severer cases we uniformly began the treatment by the administration of an active emetic, composed generally of ipecacuanha and tartarized antimony. This was immediately followed by a cathartic of calomel, either combined with rhubarb or jalap at the time of its exhibition, or carried through the bowels by large doses of senna and epsom salts, given a few hours afterward. The primæ viæ were thus cleared of foul and irritating accumulations; and a general impression was made, which, if it did not arrest the disease, appeared to moderate its violence, and to give a check in the outset, which was felt during its whole future progress. The practice was peculiarly beneficial in cases of disorder of the stomach, dependent upon the presence of great quantities of vitiated bile. The nausea was generally quieted; and articles subsequently prescribed were taken without disgust, and retained without difficulty.

As soon as pain began to be felt in the chest, blood-letting was resorted to; and the operation was repeated once, twice, or even more frequently, as the symptoms seemed to require: but in no case would the system support very free evacuation in this way. In general not more than six, eight, or ten ounces could be withdrawn at once, without inducing depression of the pulse, faintness, and great prostration of strength. The blood, however, upon its coagulation, exhibited the sizy surface and contracted edges usually associated with high inflammation; and its abstraction was followed by speedy, and often very great relief to the

patient. In connexion with the lancet, cups or leeches to the sides, or breast, or back, were employed with manifest advantage. Blisters were also applied freely over the parts affected, and rarely without more or less benefit. In the use of this last remedy, we did not feel ourselves bound to wait till the inflammation had, in great measure, yielded to the influence of depletion. We regarded it as an auxiliary to be brought early into the conflict, not merely as a reserve for the completion of victory, nor as a last resource against defeat. The impression produced by one general, and one local bleeding, was usually followed up by a blister; and if the surface healed before the disease had entirely given way, no delay was allowed in recurring to the remedy. Nor was any difficulty experienced in applying cups or leeches, if requisite, after the epispastic. If the anterior surface of the chest was under the effect of the latter, the back and shoulders afforded to the former perhaps as near an approach to the seat of the inflammation.

The internal treatment, after the administration of the emetic and cathartic, was directed chiefly to the restoration of healthy hepatic action, and to the removal from the bowels of the disordered and irritating secretions which continued to be poured into them. For this double purpose, calomel in small doses was alternated with mild, but efficient cathartics. In some cases the mercurial was given at intervals during one day, and purgatives the next; in others the alternation was allowed to occupy only twenty-four hours, calomel being prescribed in the evening, and followed up by the cathartic in the morning. The articles employed were chiefly senna, epsom salts, and rhubarb; the two first being generally directed during the period of highest action, the last when the system began to flag, and very free evacuations were not admissible. In cases of irritable stomach, the calomel was given in doses of one quarter or one-sixth of a grain, repeated every half hour or hour, till the requisite quantity was taken; and the bowels were opened by the seidlitz powder, decidedly the most pleasant form in which cathartic medicine can be administered to a patient affected with sickness or vomiting.

During the continuance of this plan, other indications were not neglected. As the fever, though never entirely absent, was paroxysmal, those remedies were prescribed which experience has

shown to be most effectual in bringing about a solution of the paroxysm. The mild saline diaphoretics, such as the acetate of ammonia, and the citrate of potash, either neutral, or in the state of effervescence, were given freely; and when the skin was hot and arid, their operation was promoted by ablutions with cool water, either alone, or mixed with vinegar or brandy.

Severe muscular pains, and great general restlessness, were remedied by combining opium and ipecacuanha with the calomel; nor were any injurious effects observed to arise from this plan, when adapted to the state of action existing at the time. On the contrary, the determination to the skin thus produced was found useful, not only for the objects above mentioned, but also in moderating the force of the internal disease. It was our endeavour, as far as was consistent with other indications, so to administer the opiate, as that its influence might be felt during the night, and thus, in connexion with the natural tendencies of the system, might procure a period of refreshing sleep.

By a steady pursuance of these measures, with others of a less important character, suggested by temporary symptoms, the complaint generally began to exhibit signs of amendment in the course of a week from its commencement. Under the influence of the alterative course of mercury, the alvine evacuations became natural in colour and consistence; and when the gums appeared to be slightly touched, an effect which was for the most part aimed at, the bronchial secretion exhibited, in almost every instance, a very favourable change. With the improvement of the secretions, the other morbid affections were generally moderated or ceased altogether; and in less than two weeks the patient was usually pronounced convalescent.

But in a very few cases, before this end was attained, the system had sunk down into a typhous condition, requiring the support of stimulating treatment. The symptoms which marked this state were a very quick, hurried respiration, with little or no pain; a frequent, weak pulse; a brown tongue; a cool skin, and much general restlessness and distress. Wine whey and the volatile alkali were found to afford speedy relief; and in one case, where these failed, the spirits of turpentine was administered with success. The diet, which had before been confined to mucilaginous, farinaceous, or acidulous drinks, was now rendered more stimu-

lating by the addition of calf's foot jelly, eggs beat up with wine and water, animal broths, and other nourishing articles of food. In the practice of using highly nutritious aliment in cases of typhous disease, requiring a stimulating treatment, I follow in the steps of my respected preceptor, Dr. Parrish, whose experience and success impart great authority to his example. I know that by many physicians the liberal use of food in such states of the system is considered rather injurious than beneficial; as the stomach, they say, is incapable of digesting the matters introduced into it, and must therefore itself suffer from their irritating effects, instead of converting them into the means of strength to the body. But this objection appears to me to be grounded on an incorrect and hypothetical assumption: for, so far as my observation has extended, the stomach possesses strong digestive powers even in states of great bodily prostration. At least, I have seldom discovered in the stools, the food that, in cases of typhus fever, I have directed to be given to the patient; and in the strengthened pulse, and increased general vigour which have ensued a few hours after it has been taken, I have been accustomed to see evidences of its beneficial operation.

It has been stated, in a previous part of the paper, that the fever, in a few cases, remained for several days after the disease of the chest had been subdued. Continuing to retain the remittent form, it was treated during the paroxysms with mild diaphoretics, and in the remission, which approached very nearly to a complete apyrexia, with tonic vegetable infusions.

Perhaps, in thinking the above details worthy of being presented to the medical public, I have been led away by that very natural feeling which induces us to attach undue importance to occurrences in which we have been personally concerned. It appears to me, however, that insulated cases of unusual disease have attracted too much attention in our journals, to the exclusion of those more ordinary complaints by which death, in all climates, and in almost every situation, makes his inroads. The fact that these are not always curable by our present modes of treatment, should stimulate us to inquire, with the utmost diligence and minuteness, into the various circumstances which modify their nature and production; so that, understanding them more accurately, we may be prepared to combat them with greater effect,

if already formed, or to crush them with more certainty while yet in embryo. The only new light which the author can have any claim to have thrown upon the subject of disease by the present essay, arises from the nature of the complaint he has described, taken in connexion with the circumstances under which it originated. These have been already detailed. It may not, however, be amiss to repeat the expression of his conviction, that the modification of morbid action observable in these cases, was owing to the combined operation of an unusually warm atmosphere overloaded with moisture, and the noxious exhalations generated in a confined and filthy situation. In the following spring, that of 1825, a similar affection occurred among the inmates of the asylum. At this time, however, only fourteen cases occurred; the symptoms were generally of a milder character, and the tendency to run down into the typhous condition was much less observable than on the former occasion. The treatment was similar, and attended with the same uniform success. A short period of warm, damp weather, in this instance, also preceded the disease; and the mansion, though much pains had been taken to render it clean and comfortable, was still partially subject to the same inconveniences. If the relative violence of the complaint on the two occasions, be compared with the relative intensity of the assumed causes, the idea of the necessary connexion between them will acquire additional confirmation. Before the spring of 1826, the institution was removed into an elegant, spacious, and most commodious building, erected for its use in the confines of the city, in an airy and healthy spot. As might have been expected, the children passed through this season without any attack of the complaint; and having space in their new home for the ordinary playful exercises of youth, have enjoyed, ever since their removal, a general healthfulness, which has known but few and very slight interruptions.

ARTICLE VIII.—*Cases illustrative of the Curative Effects of copious and long-continued Affusions of Cold Water in External Inflammations. In a letter from* L. S. TILLET, M. D., of Lancaster, Pennsylvania, to the EDITORS.

GENTLEMEN,—I send you a few cases, illustrative of the beneficial effects of cold water in violent inflammations of the extremities, following fractures, wounds, and other injuries. They occurred in the practice, and the most interesting one in the person, of Dr. ————, through whose kindness I am permitted to make them public.

In the early part of his life, this gentleman had been afflicted with a white swelling of the knee joint, from which he had the good fortune to escape with an anchylosis; which, while it occasioned him some little inconvenience, in no degree incapacitated him for a faithful discharge of his professional duties, during a period of more than twenty years. In descending the steps of his house, some time since, he unfortunately slipped, and, the heel of the anchylosed limb meeting with the projecting point of a stone, which was firmly fixed in the earth, a fracture took place at the knee joint, and the leg was doubled beneath him. With the assistance of a friend, the parts were replaced as nearly as possible in their original situation; and having been removed into the house, medical assistance was immediately procured: it was to little purpose, however, as, notwithstanding the excruciating pain which he suffered, he had already determined on the treatment to be pursued. Convinced, by long experience, of the utility of cold applications, in cases of this nature, he resolved to confide his life to them alone; and, throughout his whole confinement, perfinaciously refused to submit to venesection, or to take purgative medicine, in sufficient quantity to do more than maintain the regular peristaltic action of the intestines. Indeed, his great size, and the exquisite pain attendant upon the least motion, limited his friends to the exhibition of mild laxatives only. By this time the knee had become much swollen, and it was evident that whatever plan was adopted must be vigorously pursued: the leg was extended upon a pillow, no dressings of any kind applied; and the coldest water that could be procured, was poured upon the naked limb,

at first, almost constantly, and afterwards, as the inflammation subsided, in quantity of a pint every five and ten minutes *for three weeks*. At the expiration of this period, having been removed to a dry bed, and almost exhausted by the continued state of submersion, in which he had been for so long a time, he resolved to try the effect of cloths *moderately wet* with a solution of the acetate of lead, &c. In less than three hours, a most marked difference had taken place in the state of the limb; the inflammation had greatly increased: the pain had become almost insupportable, shooting upwards to the body, and downwards to the foot. A vesicle, five lines in diameter, containing a yellowish serum, made its appearance on the superior part of the joint, and every symptom, in short, bore evidence of the impending danger. No time was to be lost; cold water was instantly had recourse to, in quantity as great as in the first instance, and with the same salutary consequences. The inflammation again subsided, with a consequent diminution of pain; the vesicle became shrivelled, from an absorption of its contents, and ultimately disappeared altogether. A continuance of this plan, proportioned to the degree of inflammation, for three weeks longer, effected a complete cure; and, in eight weeks from the occurrence of the accident, he was able to walk with the assistance of crutches.

A more unequivocal proof of the powerful agency of cold water, than this case affords, cannot be desired. The patient was extremely corpulent, weighing upwards of *three hundred pounds*. The inflammatory action ran so high, that the water would rise from the limb in vapour. The accident occurred in the month of August; and, with the exception of a very abstemious diet, there was no other remedy employed. It may be said, perhaps, that general and local depletion vigorously pursued, would have been attended with a like beneficial result; but to the former, the prejudices of the patient opposed an insuperable objection, and besides that, in the country, and at a distance from any considerable town, (as was the case in this instance,) leeches cannot always be procured, there is great reason to think, that they would have been totally inadequate to subdue the violent inflammation which existed here, and which, upon a mere relaxation of the treatment, at the expiration of three weeks, threatened the life of the patient.

Another instance, in which the same remedy was successfully

employed, communicated to me by the gentleman whose case I have just related, is little less remarkable, inasmuch as it is a case for which, not many years ago, amputation would have been deemed necessary. A woman, jumping out of a wagon, the horses of which were unruly, dislocated the tibia at the ankle; the bone protruded through the integuments, and penetrated the earth to some distance. The dislocation was reduced by a surgeon who happened to be near at the time; and, the day following, the woman having been conveyed to her house, Dr. ———— was sent for. He found the leg much swollen and inflamed, and the patient in great agony. Cold water was instantly applied, and with the most salutary consequences. In five weeks the patient was able to walk about the house; though, from the nature of the injury, the joint was affected for some time after, with a considerable degree of stiffness. I could adduce many instances of compound fractures, in which the free employment of this remedy was attended with a like happy result. Among others, one which occurred in my own practice, in which both the bones of the leg were fractured, and the integuments much lacerated, the patient being at the time in a state of inebriety. The inflammation was restrained within due limits, and, although from the injury done to the integuments, union by the first intention did not take place, the cure progressed without a single unpleasant symptom. But enough has surely been said to prove, that cold, *properly* applied, is possessed of much higher remedial power than has hitherto been attributed to it. I say *properly*, because the usual manner in which it is employed, by means of cloths wet with a solution of acetate of lead and other substances, removed as often as they become dry by evaporation, is productive of comparatively little advantage; it may be useful in mild cases, but, in the more violent grades of inflammation, must be altogether nugatory: here a more vigorous treatment is demanded; the coldest spring or well water should be procured, or, if necessary, it may be cooled artificially, and the limb be kept constantly bathed in it, until the morbid excitement be reduced; and this, I hesitate not to say, in a constitution otherwise healthy, will be the almost necessary consequence of the employment of cold water to the extent I have recommended. I wish to speak the more earnestly on this subject, because I think I have observed, in country practice more especially, many un-

pleasant consequences to follow from a want of correct ideas in relation to the remedy, which it is the object of this paper to introduce more particularly to the notice of the profession. In the country, as I before stated, leeches cannot always be had, the application of the scarificator may be frequently inconvenient and sometimes impossible; and general depletion, unassisted by local treatment, will often prove ineffectual; while, in cold water, we have a remedy, abundantly found throughout the whole of our widely extended country, and possessed of virtues which should long ago have attracted to it much more attention than it has hitherto received. In our cities also, I am convinced, its employment might be very beneficially extended. Gangrene, consequent upon violent inflammation, though by no means of such frequent occurrence as formerly, is still met with sufficiently often, to call forth all our exertions for its prevention; and I am acquainted with no remedy, better calculated to produce such an effect, than the one which I have recommended. The present treatment of such cases, appears to me, to be particularly faulty. A patient, for example, is brought into one of our hospitals, with a large lacerated wound of one of the extremities: the surgeon immediately perceives that union by the first intention, is, in many cases, impracticable, and that suppuration is the next most desirable termination; to promote which, a warm poultice of bread and milk, or some other emollient substances, is immediately applied. It is true, that, if the inflammation transcend, as is almost always the case, the degree requisite for the formation of pus, leeches are directed, and the antiphlogistic plan, generally, is adopted; but, in some instances, this change of treatment is not made, until the inflammation has attained a height which admits of no control, and in others it would have proved inadequate from the commencement; and, even when successful, it is attended with an unnecessary loss of time, and confinement of the patient. In all such cases, I am fully convinced, that the free application of cold water would tend more effectually than any thing else, to control inflammatory action, and accelerate the cure.

In fractures, whether simple or compound, the action necessary to re-union is, I believe, very little greater than that of the ordinary healthy action of the part; and I am disposed to think, that, in most instances, the process might be much shortened, by an

attention to this circumstance. A case has been related to me, upon unquestionable authority, of fracture of both bones of the leg, a little above the ankle, followed by re-union in *nine* days. The person had fallen into a well, where he lay nearly an hour before assistance could be rendered him; after being taken out, cold water was applied, as above recommended; and, upon entering the apartment on the morning of the ninth day, the physician in attendance was not a little surprised to find his patient sitting on the side of the bed, with his foot on the floor. Upon examination, the bone, though not entirely consolidated, was found sufficiently so, to admit of the abandonment of all artificial support.

Nothing has been farther from my object, in this paper, than to depreciate the value of general and local depletion, in the treatment of all inflammatory affections—they are, indeed, indispensable. I have only sought to raise from the situation of a humble auxiliary, a remedy, which some little experience has taught me, is entitled to rank as a principal.

Very respectfully, &c. L. S. TILLET.

To the Editors of the N. A. M. and S. Journal.

We are really indebted to Dr. TILLET for the above interesting and valuable paper. His results go to confirm those of several former observers; particularly of BARON LARREY. By multiplying our resources, we increase our ability to control disease. It is by the judicious selection, and often by the conjoint operation of two or more remedies, that we can ensure success.

EDITORS.

ARTICLE IX.—*Account of a New Form of Bronchial Disease.* By WILLIAM DARRACH, M. D., &c. Read before the Kappa Lambda Society.

WITHIN the last few months, a catarrhal disease has appeared in this city, which, on examination after death, was found seated in the *bronchial tubes.*

The bronchia were filled with mucus, which was of various degrees of consistence, more or less frothy, and more or less of a yellowish colour. The lining membrane was deeply reddened;

particularly that portion of it which covers the immediate ramifications of the bifurcations of the trachea, and the membranous part of the bifurcations themselves. The colour, in three of the cases, was more brown than red.

This morbid appearance, when attentively examined by means of glasses, and, when the part has become dry and diaphanous, by the aid of transmitted light, could not be found to depend upon injected capillaries or stellated spots, such as are so commonly found in the villous coats of the stomach and intestines; a redness uniformly diffused over the surface, as a stain, is all that was observable, except in a solitary case. In this, a few ramifications and lines could be detected in the general redness of the mucous surface.

The stomach exhibited the appearance commonly supposed indicative of inflammation, but in a very slight degree; except in one case, where, on the contrary, the venous trunk and branches were all very much distended, the net-work of capillaries filled with red blood and stellated spots, and red stains were very abundant.

The symptoms which have characterized this catarrhal disease, were;

1st. *A shortness of breathing*, which was present at the commencement of the complaint, and increased daily till death. The pulse was generally small, quick, and with little more than ordinary frequency. It was considered indicative of a typhous state.

2nd. *A remarkable preservation of the intellectual faculties.* The cases differed in this respect from the usual typhus fever. Though other symptoms of an alarming nature appeared, the mind remained perfect and calm.

In some of the cases, however, the head was affected, as we commonly find it in low fever. There was severe pain, which neither local depletions nor blisters relieved, but followed by delirium, coma, subsultus tendinum, and a laborious respiration, with stertor, superadded to the characteristic shortness of breathing above noticed.

3d. *The patient remaining in a dying state an unusual length of time.* Two, three, and, in one case, four days, elapsed before the fatal termination; the body was cold, pulseless, prostrated, and motionless; the countenance collapsed and fixed, like that of

death; and no power of speech and deglutition existed; yet the patient continued, conscious of his situation, to make any effort the attendants might request. He seemed to be patiently and quietly labouring under an obstructed respiration. The immediate cause of death in these cases was, evidently, the *copiousness of the mucous secretion*, which filled the ramifications of the bronchia, and prevented the access of air to the pulmonary circulation.

The morbid state of the membrane which fabricated the mucus, had, doubtless, the same *prostrating effect* on the system, that disease extensively diffused has in any other surface of the body; such as the skin, peritoneum, stomach, bladder, &c.

The treatment adopted in the cases which occurred previous to the post mortem examinations, consisted of emetics, purges, and alterative doses of mercury, together with blisters, and the ordinary stimulants.

The treatment subsequently embraced copious and frequent bleeding, local and general, and at the close, half drachm or drachm doses of the spirit of turpentine. They were equally ineffectual.

Two cases which have occurred within the last two weeks, have terminated favourably under the combined use of the digitalis, and spirit of turpentine.

In one of the cases, the treatment was commenced with a combination of calomel, tartar emetic, and ipecacuanha. The tincture of digitalis, united with that of tolu, was then given in doses of gtt x. of the former, with gtt xx. of the latter, every three hours. The pulse became slow, and the shortness of breathing ceased, after two days' continuance of the medicine. The system became prostrated, and drachm doses of the spirits of turpentine were administered. The patient soon revived.

The other case was treated with the spirit of turpentine alone. For two days, the patient's pulse could not be felt.

The above treatments were suggested by Dr. Hartshorne and Dr. Moore.

It may be remarked, that the pectoral mixtures, in which the digitalis was the principal ingredient, have been found the most effectual remedies in the numerous cases of catarrh, which have been prescribed for, in the last two months, at the city dispensary.

The above cases have recalled to my mind one of an adult, examined with Dr. JACKSON, in which the same frothy mucus filled the bronchial cavities; as also, the case of a child, which died, as I supposed, of croup. On examination, the same kind of mucus was found, and the membrane was, throughout, of a brownish-red colour. A few days past, I witnessed the examination of an infant, with Dr. MEIGS; the bronchia of which were filled with a yellowish mucus, of greater consistence than that in the above described cases.

ARTICLE X.—*Case of Diseased Brain. Communicated to the Philadelphia College of Physicians, Dec. 4th*, 1827. By HENRY BOND, M. D.

CHARLOTTE BLACKSTONE died, Sunday, 19th November, 1827, aged forty years. She began to complain of pain in the head about the beginning of the preceding March. About the same time, she began to be troubled with a noise or roaring in her head, which she compared to the hum of bees. She was able to work during March and a part of April. The noise continued three months or more; but there is some uncertainty in regard to the time when the noise ceased, and when her hearing began to fail. She complained, from the first, of having very strange feelings, as well as noises, in her head, very different from any head-ach she ever had before; and often expressed her belief, that she should never recover. The pain was chiefly referred to the back part of her head; but there was never any complaint of heat in the part; and she was unable to attribute her disorder to any known cause. During nearly the whole progress of the disease, she has complained of pain in the right hypochondriac region; and has been very little affected with febrile symptoms at any period. I cannot ascertain precisely when her sight and hearing began to fail; but about the middle of August she went to a methodist camp-meeting, at which time she was able to hear loud speaking, and so much sight remained, that she was able to get

about without a guide. Her appetite was variable during the spring and early part of the summer. It became more and more deficient during the latter part of summer; and, for several weeks before her death, there was scarcely any remaining. During the latter period, she would take nothing more substantial than gruel or broth, and roast apples, and preferred acidulous drinks and cold water. Her bowels were torpid during the whole progress of the disease. For two or three months before her death, she very seldom had a stool without taking a cathartic; and the discharges were dark and unnatural. During the last four weeks of her life, she had only two stools, and those were obtained by cathartics. For several weeks before her death, she would sometimes pass two or three days without urinating, at other times she urinated copiously: the fluid was as dark as coffee.

Towards the end of August, one week after her return from the camp-meeting, she began to have fits. The first was more severe than any she had afterwards. The spasms were very violent, seemed to affect one side more than the other, and lasted as much as an hour. At the time she had four or five of the first fits, she was not in the care of the sister from whom I derived most of this history, and with whom she had only one fit, which was attended with spasms. That happened on the 18th of September. When she got out of bed, she was seized with a violent tremor throughout the right half of the body; and became very rigid, with the eyes strongly rolled up and fixed. The stiffness continued about five minutes: she then became very much relaxed, and apparently lifeless, as she was not observed to breathe. At the end of about five minutes more, she came to herself, and assisted in getting into bed. She continued to have fits once, sometimes twice a day, and at other times at longer intervals, until a short time before her death. They resembled that just described, except that they were not attended with the violent tremors, and the other phenomena were less violent. When attacked, her head would begin to move backwards and forwards, making a nodding motion, and she would fall down, if not supported; became stiff, with her head strongly drawn back; groaned; then became relaxed, and, usually at the end of about ten minutes, came to herself. The fits seldom came on except

when she got out of bed, or was in an erect posture. She could tell when one was coming on, and would ask to be laid in a horizontal posture. If the fit came on while in bed, or in a horizontal posture, they were much less violent.

Her sight had become very defective before she began to have fits; but it was totally gone, not the least sensibility to light remaining, before she had had half a dozen. Until about the time she began to have them, she retained some sensibility to light, and could distinguish very luminous objects. Gleams, or flashes of light would come across her sight, and then subside. The last of those was more vivid than usual, and was succeeded by total darkness, which never left her afterwards. This happened more than two months before her death.

When I first saw her, (September 19th,) I could discover no sensibility to sound. When I spoke loud very near her, it produced not the least apparent effect, and it is probable her hearing left her about the same time as her sight, during those early violent fits. Her friends think she lost the sense of smell earlier than those of sight or hearing. About a month before I saw her, if volatiles were applied to her nose, she said she had lost her smell, and could smell nothing. It is not known that she ever referred any pain to her eyes or ears.

She never lost the sense of taste entirely, but it was very much impaired during the last month. At what time it began to fail, is not known. During the last month, her attendant says she could not distinguish one drink from another, unless the taste of it was very intense. She could not discriminate broth from gruel, tea from coffee, or warm water from either. The catamenial secretion never failed, until the last period when it should have occurred, two weeks before her death.

From an early period of the disease, she was troubled with a rising in the throat, which continued during the summer, but was not observed in the last stages of it. It produced gagging, but no vomiting. She was often observed to be swallowing, and made a noise as if drinking. The function of deglutition remained unimpaired to the last.

She has left children, but was never heard to speak of them after the 18th of September; at which time she gave directions for the distribution of her clothes, &c. among them; and that was

the day, on which she had the last fit attended with the violent tremors of the right side.

On the 27th of September, she was removed into New Jersey, five miles beyond Market Street ferry, and was carried in a wagon upon a bed, in a recumbent posture. She did not evince that the motion of the wagon hurt her head, but frequently held her hand to her right side. She had no fits during her removal. Before she lost her hearing, something had been said about placing her in the Philadelphia Alms House, which proposal was very disagreeable to her. When she was put into the wagon to be removed, she said nothing, but, by her actions, evinced an unwillingness to get into it. As soon as the wagon stood still in the ferry-boat, she wished to know if she were in the Alms House, but her sister could devise no means at the time to answer her. As soon as the wagon started from the river, she judged, from its motion, that they were in the country, and asked her how far they were going; and was told, by touching her five times, that it was five miles. From this reply she concluded, that they were going to her uncle's, and evinced some satisfaction at finding that she was not in the Alms House. She assisted herself out of the wagon, and walked into the house, only needing a guide to lean upon. She remained in her uncle's house from Thursday until Saturday of the next week, before she seemed to apprehend that any one was in it besides her sister. She asked, repeatedly, why her uncle and aunt did not come home, for they did not recollect to signify to her that they were there, by the only means of communication with her that remained. At the end of nine days, when she once more asked for them, they took her by the hand. She appeared to recognise them, spoke to them about family affairs, spoke of her severe afflictions, and particularly lamented that she was cut off from communication with them by the loss of sight and hearing. About four weeks before her death, she was brought back to the city in the same manner she was carried away. When on the way, she said she knew not where she was, or where she was going; and ever after appeared to suppose, that she was among strangers. Whether she supposed herself to be in the Alms House is not known. At the time of her return to the city, she had become very helpless in her lower extremities. She sat up from half an hour to an hour every day, until the Thursday before she

died. She was, however, very helpless, and had to be taken out like an infant. It was seldom her choice to get up, or be moved, and sometimes she remonstrated against it; but her friends thought another course would be better for her. The will retained its influence over the upper extremities to the last, or very nearly so. Until two weeks before her death, she would assist in adjusting her clothes. During the last two weeks, she was not able to turn herself in bed; but if any food was put into her mouth, or offered to her, when she did not wish it, she would spit it out, and put her hand to her mouth, and resist the attempts to remove it; and this she continued to do until within twenty-four hours before her death. There was no evidence that the facial nerve ceased to perform its functions. For several weeks before that event, she very seldom spoke aloud, except when food was given, or attempts were made to move her, or when she prayed. She very generally declined taking food, during the last few weeks, and when it was urged upon her, would say, where is the use of taking it, when I am not hungry, and my stomach is full? At other times she would say, I will take some of it for the sake of peace. She prayed aloud once or more times every day, until two days before her death, and then ceased to do so, as her friends think, on account of her extreme debility. According to their representations, her prayers were short, coherent, and pertinent to her circumstances; such as did not indicate any mental alienation. The last time she was heard to speak, was about thirty-six hours before her death; she then requested the attendant, who was attempting to render her some service, to let her be quiet, for she should soon be gone and at rest.

When I first saw her, (two months before her death, and when she had entirely lost the senses of sight, hearing, and smell,) I found no external indication of any serious disorder in the system. The pulse was perhaps a little more feeble and frequent than natural: no preternatural warmth or coldness in any part of the external surface; respiration easy; tongue moist and whitish, but could hardly be said to be coated; pupils dilated, but not to a great extent. On account of the loss of her senses, I could hold no communication with her; but was told that she complained of pain in her right side, and strange feelings and pain in her head; that she was costive, and her appetite deficient. I saw her but a few

times before she was removed to the country. She had no medical attendance afterwards, and I did not see her again until the morning I made the *post mortem* examination; but I am satisfied that the preceding history is accurate in every essential point.

The *post mortem examination* was made twenty-seven hours after death; in making which, I was assisted by my friend, Dr. Meigs. No appearance of disease was observed upon the dura mater, or upon the upper surface of the brain. Upon separating the hemispheres, their edges, which rest upon the corpus callosum, were found to adhere together more firmly, and the vessels about the part to be larger, and more numerous, than usual. But there was no effusion nor opacity; nothing which indicated recent inflammation. When the hemispheres were separated, so as to expose the corpus callosum, it was observed to be more convex than usual, and to press up against their inferior contiguous edges. In removing the hemispheres by sections down to the level of the corpus callosum, we observed no signs of disease. The lateral and third ventricles were pretty uniformly distended, and were supposed to contain about ℥iss. or ℥ij. of limpid water. The commissures and septum lucidum were all entire, and the distension, without disorganizing or effacing any part, had gone just far enough to present a most beautiful view of the organization of these parts. The velum interpositum had acquired, in some places, by the deposition of coagulated lymph or albumen, the thickness of one line or more. It had a milky opacity, which was observed in a slight degree in the plexus choroides. Where the lateral ventricles make the great bend into the inferior horns, numerous veins were seen, all running nearly parallel to each other, and transversely to the course of the ventricles. They all ran from the vault or ceiling of the ventricles down into the groove upon the outer or convex side of the hippocampus, but none were seen upon that body. They extended almost to the extremity of the horn. This was observed in both ventricles. Upon removing the posterior part of the corpus callosum and fornix, in order to examine the parts beneath, I opened an abscess, from which a straw-coloured, transparent fluid issued. This fluid occupied the cavity which belongs to the corpora quadrigemina, pineal gland, &c. The peduncles of the pineal gland remained, and the thalami appeared to be unaffected; but there was no trace of the gland

remaining: the origin of the fourth pair of nerves was destroyed, and nothing left, which resembled the corpora quadrigemina. In place of them, we found a surface, covered with an ash-gray-coloured pus. When this was wiped off, it left a surface of the same colour, but of more consistence; and apparently made up of slight filaments and matter considerably softer than cerebral substance. This suppuration or ulceration extended beyond the corpora quadrigemina both laterally and posteriorly; and we believe, that it extended through the valve of Vieussens into the fourth ventricle, but we did not pay so much attention to that point, that we can now say that it was demonstrated.

Immediately behind the great bend of the left lateral ventricle, and upon the outside of the posterior horn, an abscess was found about the size of a marble. We discovered no communication between this and the one just described; but, when it was opened, we found the same transparent, straw-coloured fluid, and the same ash-gray pus lying upon a surface of the same colour and structure as in the other abscess. The parietes of this abscess were white cerebral substance, of very firm consistence, with no appearance of vascularity. This abscess communicated at the bottom with another, which extended under the hippocampus major of the same side, nearly its whole length, and possessed the same characters. On looking into the ventricle, this hippocampus presented no appearance of disease; but the lamina of cerebral substance, interposed between the ventricle and the abscess, was about one-tenth of an inch in thickness.

The optic nerve, on the left side, was destroyed by suppuration, for the length of an inch and a quarter from its origin in the tubercula quadrigemina. The nerve on the right side was destroyed for the space of half an inch. Wherever the suppuration had not extended, the nerve seemed full and well developed, particularly just before and behind the point of decussation; certainly there was not the least appearance of atrophy discovered in either of the optic nerves.

That part of the under surface of the cerebrum and cerebellum, which is contiguous to the pars petrosa, appeared to be softened and covered with a thin coat of common pus. We did not observe any marks of disease in the medulla oblongata. The seventh pair of cerebral nerves were enveloped in pus, in their passage

from the medulla oblongata into the meatus auditorius internus, but they did not themselves appear to be diseased.

The liver was small, flabby, and very dark coloured. The gall-bladder contained about ℥ij. of bile; and the contiguous parts, instead of being stained, as usual, with a dark yellowish or greenish hue, were of an inky blackness. The small intestines were entirely empty, but the colon was considerably loaded with fœces of a very dark colour. As far as examined, there was no appearance of disease in the stomach or intestines. The patient could hardly be said to be emaciated, as the adipose matter on the abdomen was half an inch thick.

ARTICLE XI.—*Remarks on the Eruptive Disease produced by the Internal Use of Balsamum Copaibæ.* Read before the Kappa Lambda Society; by THOMAS T. HEWSON, M. D. &c.

URTICARIA has been noticed by medical writers, as frequently following the use of certain articles of food. Fish, particularly those denominated in popular language shell-fish, as the crab and lobster, when not perfectly fresh, have been often observed to induce the disease. The bitter almond, and bay leaves, which are occasionally employed in culinary processes to impart an agreeable flavour to some of the more delicate dishes, have been known in some individuals to produce this complaint. And where particular idiosyncrasy prevails, this troublesome eruption has occurred after drinking porter; owing, as is supposed, to the presence of the hop, on which the bitter flavour of that beverage depends. Every one is familiar with the occasional effects of opium; the person who has taken of that valuable drug being frequently affected with a distressing itching of the skin, but, for the most part, unattended with any efflorescence on the surface of the body. Upon consulting those who have written on the various diseases of the skin, I do not find any notice of such affections being induced by the internal use of the terebinthinate articles so frequently employed in medicine. I have therefore thought

that the communication of the observations I have made, might not be uninteresting to the gentlemen of this meeting.

In July last, I visited a married lady labouring under leucorrhœa. The disease came on after the birth of an only child, which she bore in her first marriage; and had continued from that time, embracing a period of eleven years. Many physicians on the continent of Europe had been consulted, and a variety of remedies had been employed, without her having obtained any relief. These circumstances induced me to solicit an opportunity of making an examination per vaginam; and not finding any derangement in the structure of the uterus, or in the canal conducting to that organ, I entertained a hope, that she might derive benefit from the use of medicine. I directed a mixture, composed of equal parts of balsam copaiba, and the spirit of nitrous æther, (suspended in water by means of the acacia gum, and sweetened with loaf sugar,) in doses of half a drachm of the copaiba, night and morning. After having continued this medicine for about a week, this lady was attacked, in the evening, with pains in the larger joints, accompanied by some uneasiness at stomach, and soon followed by a violent itching and tingling in the skin. The next morning I found my patient greatly disfigured; all those parts of her body which were exposed, being covered with an efflorescence of a damask red colour. The spots, taken singly, might have been about three-eighths of an inch in diameter, with a slight elevation in the centre. For the most part they had coalesced in patches of an indefinite figure. The eyelids were swollen, and there was a great swelling of the face. There was likewise considerable intumescence of the hands and arms. In the course of a few days, by omitting the copaiba, and by resorting to a light diet and gentle purging, by means of the supertartrate of potash, the eruption vanished.

At first, I was disposed to view this eruption, attendant on the exhibition of the copaiba, as attributable to a peculiarity of constitution, that might not often be met with. But, not long after, a different impression was made on my mind, in consequence of a similar eruption which occurred in a gentleman under my care for gonorrhœa. In the month of September, after the puriform discharge from the urethra had been entirely removed, he was

affected with an eruption, to the best of my recollection, bearing all the character of nettle rash.

Since that period, two other cases of eruption in persons taking the balsam copaiba, have come under my notice. Here, however, the disease has appeared to me to resemble more strictly the roseola, as depicted by WILLAN, in his valuable work on the diseases of the skin. One was in a young gentleman who had consulted me for the gonorrhœa. I had seen my patient in the morning; in the evening he came to my house in great alarm, the skin on his breast and arms being covered with red blotches, not elevated, generally coalescing in patches, and bearing some resemblance to scarlatina, though rather fainter in colour. The other occurred in a person, who, on inquiry, I found had been taking copaiba for gonorrhœa. In both these instances, the affection of the skin disappeared in three days, on omitting the copaiba, and employing the supertartrate of potash, as a gentle laxative.

The balsam employed in the foregoing cases was procured from three different shops in the city, thus precluding the probability of any of those adulterations, or accidental changes, which so frequently impair the virtues of our remedies, or impart to them new and deleterious properties. I am therefore inclined to believe, that the inconvenience experienced may be fairly imputed to the article itself: and this is confirmed by the observations as published by ARMSTRONG, in 1818. Future observations may explain the cause and point out the means of prevention.

ARTICLE XII.—*Account of Operations for destroying the Stone, performed by* M. CIVIALE. *In a letter to Dr. Hodge from R. La Roche, M. D.*

Marseilles, Oct. 19, 1827.

WHEN I arrived at Paris, I was very desirous of seeing M. CIVIALE operate for the stone; for, independently of the curiosity which every member of the profession must naturally feel, and which of course I felt, to witness an operation of which so much has been said, and which is regarded by the most competent judges as likely to supersede, in many cases, the necessity for

the ordinary painful and dangerous method, I had other motives for wishing to see it. These were to find out the causes of our failures in Philadelphia, with the instruments, such as they had been described to us by our friend Dr. BROWN; failures too in which I felt rather interested, inasmuch as I had been one of the first to recommend the operation to our countrymen, and to expatiate on the great benefits that were likely to resort from its adoption by our surgeons. An opportunity soon presented itself of gratifying my wishes; for having gone, on the morning of the 28th of June, (in company with Dr. M'CLOUGLIN, a very amiable and intelligent English physician with whom I had the pleasure of becoming acquainted at Paris, and to whom I am under many obligations,) to the Hospital du Gros Caillou, for the purpose of seeing M. LARREY, we there met M. CIVIALE, to whom Dr. M'C. introduced me, and who kindly invited us to his house the next day, to witness the operation on several individuals. I need hardly tell you I gratefully accepted the invitation, and was punctual at the rendezvous.

The operation was performed on two individuals. A third had his bladder *explored*, with a view of finding out, if there remained in it, any fragments of calculus; for he had been operated upon several times. In the first of the two before mentioned individuals, the stone had been in part pulverized and broken, in some previous sittings; in consequence of which, a fragment had passed into the canal of the urethra, and was stopped within half an inch or an inch of the end of the penis. M. CIVIALE succeeded, by means of a pair of dissecting forceps, in breaking this fragment, and extracting it by pieces; for it was very large, much more so, indeed, than was at first expected, and so irregular as to adhere very firmly to the coats of the canal. Another, but smaller piece, was discovered a little lower down, and scooped out, with the help of one of the blades of the lithontriptic forceps. This done, M. C. introduced a curved gum-elastic canula into the bladder, and through it injected some water into that viscus. I must here mention, that after the canula is removed, the greater portion of the water remains in the bladder, which I confess somewhat astonished me; for I had been induced to expect, that the liquid, by irritating the mucous membrane of the bladder, would compel the viscus to contract, and empty itself. Perhaps it is to guard

against this effect, which I now suspect will only arise from the stimulus of distention, that M. C. never injects more water than the bladder can well receive with ease, and always inquires of the patient, the best judge in those matters, if a sufficient quantity has been thrown in.

The next step in the operation was the introduction of the instruments. This, as you may remember, was thought in America to be difficult, and even to constitute one of the greatest objections to the operation itself; because these instruments are straight, while the canal of the urethra, through which they must necessarily pass, is curved. Be the shape of the urethra, however, what it may, no such difficulty was encountered by M. Civiale. I will even go further, and affirm, that in these cases, the introduction was affected with more facility, and in much less time, than I had ever seen done by other surgeons, with the common curved sound; so that I am disposed to conclude, that all the objections raised against the operation, and grounded solely on the shape of the instruments, can be very easily removed by witnessing a trial of them by a skilful surgeon. After searching a little while, a fragment of stone was discovered; but, as it was somewhat small, some difficulty was experienced in grasping it firmly enough between the blades of the forceps to allow the full effect of the file. This was finally done, however, and as the stone was soft and friable, the boring was accomplished in a very few minutes. A quantity of sand mixed with water was passed out during the operation between the urethra and the sound. No difficulty was found in turning the stone when it had been bored; all that was necessary was to loosen it a little in the forceps, turn them rather suddenly, and move them about. The boring was once more resumed; after which, the instruments being removed, the patient was allowed to make water. Another operation, to which he was to submit a few days after, has probably terminated the business in this case, and rid the patient, at least for some time, of his painful complaint. He appears to have laboured a very long time under the calculous diathesis; as he is now upwards of sixty years of age, and was cut at twelve years for the stone. M. C. was not a little pleased to point out to me a fistulous opening in the perineum of this man, consequent on the operation last alluded to.

The second patient was about fifty years of age, and had laboured a long time under the disease. The stone was very hard and large, and had already necessitated eight operations. Water was injected, as in the former case; the instruments were introduced with the same facility; the stone seized almost immediately, bored, turned, and bored again, several times. M. CIVIALE did not expect to remove all that remains of the calculus, without three or four more sittings. As regards the third patient, I have already said, that M. C. merely sounded him, to ascertain if there remained any fragments of stone in his bladder. This was accomplished with the full set of instruments, so that if any thing had been found, it would have been seized at once and destroyed.

The degree of pain, caused by the operation in the cases I witnessed, varied. In the first it was considerable, and the patient could hardly prevent himself from bearing down and expelling the water. This was particularly the case while the stone was sought after. In the second, much less pain was experienced; while the third patient seemed to suffer very much, from the motions which were necessarily imparted to the instrument, with a view of exploring the whole of the viscus. After the operation, the patients seemed very little incommoded, and, after making water, walked out as if nothing had happened. They are subjected to a suitable regimen, for preventing the occurrence of inflammation, and with the same intention they are recommended to resort frequently to the use of tepid baths.

This method of removing the stone from the bladder, requires, as you may readily presume, a great deal of dexterity, and a considerable experience in the use of the instruments, on the part of the operator. Many of the best surgeons in France have failed in their first trials; and I am really sorry that in our country it should have been laid aside so soon, merely because those who resorted to it, were not able to wield the instruments at once, with sufficient dexterity to seize and bore the stone as readily as those who had more experience than they. As regards M. CIVIALE, it is impossible to see him operate without admiring the care with which he introduces the instruments, and accomplishes all the steps of the operation. It is true, that this dexterity can only be acquired by long exercise; but can we not say the same of all operations? and ought a surgeon to lay aside, in despair, and even to censure, a new,

less painful, and less dangerous method of ridding a patient of the stone, because, after pushing into the bladder an improper instrument, he has failed to grasp the stone, and to destroy it? I have said an improper instrument, because, after witnessing M. Civiale's operations, and examining attentively his instruments, I am convinced that the failures in America arise from the improper construction of those made use of there. For example, M. Civiale's forceps, present, when closed and placed in the canula, an olive like extremity. This is easily done; for two of the blades which are curved in at the extremity are of the same length, and placed in pretty close contact, while the third, being longer, laps, as it were, over the others, and, the extremity being curved like that of the former, forms the extreme end of the olive, and, when embued with simple cerate, offers little or no roughness to the urethra, as it is pushed along into the bladder. In order that the blades should be of sufficient strength, they are made pretty thick, and are rather larger when closed than the canula, so that they cannot pass through the latter; and to be placed at the end of it, it is necessary to introduce their stem backwards. Into this stem is also introduced backwards, that of the rasp or file. Here, then, is a complete instrument, three in one, the extremity of which is formed by the forceps, and of the proper shape for finding its way into the bladder. Now mark the difference. In the first trial made in Philadelphia, the surgeon attempted to introduce the canula, without the forceps, or any thing else, in it, which could afford a round extremity; and it was only after working at it a quarter of an hour with an instrument which was naturally impeded in its progress by the folds of the urethra, that a bougie was placed in the canula, and enabled it to be introduced. But all these trials had tended to increase the already great irritability of the bladder and urethra: so that, when water was injected into it, it was almost immediately expelled; and the patient suffered so much pain, on the introduction of Mr. Rorer's ingenious forceps, of which I shall have occasion to speak by and by, that the operator desisted, and, so far as I have been able to learn, never again made a trial of the instruments. In the next trials, the canula was again introduced without the forceps, the round extremity being made by means of a steel rod, which was removed to make room for the forceps. It must be very clear, that these, in order to pass

freely through the canula, must be very thin and pliable, too much so indeed to grasp firmly a calculus subjected to a powerful friction; and, 2ndly, even supposing that the forceps had answered, it is evident that the lithontriptor must be too small at the extremity to allow it to make a sufficiently large hole in the stone; and that, before a large calculus could have been destroyed by it, it would be necessary that the boring should have been repeated at least one hundred times. As regards Mr. LUKENS's instrument, in which many of the objections to which I have alluded were obviated, I can say nothing; as I do not know, that more than one trial was made of it in America, and that too in an individual whose urethra was very small and irritable. M. CIVIALE, however, told me, that one of the greatest objections to it was, that when the stone was once enclosed in the kind of steel basket in which the forceps terminate, it was impossible to get rid of it, in order to withdraw the instrument. Of this I do not pretend to be competent to judge.

Several surgeons have devoted great attention to this operation in France, and some have made alterations in the instruments, which are regarded by them and their friends as improvements, but by others as not worthy of much notice. Among these *modifiers*, M. HEURTELOUP and M. MEIRIEN are more spoken of than any others. Having never seen the instruments made use of by the former, I must be silent on the subject of them. As regards those which M. MEIRIEN has contrived, having had an opportunity, at a meeting of the Royal Medical Society of this city, of examining them, as well as of hearing M. M. describe them himself, I will communicate to you all I heard and saw on that occasion. As is generally the case on such occasions, M. MEIRIEN, before describing his own instruments, pointed out the defects of M. CIVIALE's. He remarked, 1st, that the olive, which the three blades of the forceps form by their union, not being complete, its introduction is difficult, and the mucous membrane of the urethra, dipping into the interstices which exist between them, may be torn (or, as he expressed it, ploughed) by the lithontriptor. 2nd. The strawberry extremity of the lithontriptor presenting a larger diameter than the cavity of the tube of the stem of the forceps, it is impossible to introduce and withdraw it at pleasure, so that it is necessary, in order to distend the bladder, to introduce primarily

an ordinary catheter, and inject water into that viscus before the introduction of the instruments, which complicates the operation. Moreover, as the water injected into the bladder always escapes during the operation, it may happen, owing to the difficulty of replacing it, that the bladder will embrace powerfully the stone and the instruments, and, in consequence of this, the surgeon will not be able to get rid of the former, and from this to disengage the instrument, with a view of withdrawing it from the bladder; or if it succeed, it may only be with the danger of pinching and tearing that viscus. 3d. This accident is so much the more to be feared, as the hooks which form the extreme ends of the blades of the forceps pass over each other, and can, consequently, the more readily seize and tear the coats of the bladder. The fear of this accident is not imaginary; for it has been found, by dissections, to have really happened. 4th. For numerous reasons, which are easily appreciated when we have the instruments before us, the stone is often with difficulty grasped, or it is seized improperly, (as for example, by its long diameter, or by one of its extremities only,) and then it escapes very readily. This also happens, when the diameter of the stone is more than eighteen lines. 5th. When the stone is seized in the most favourable manner possible, and firmly secured, it is only in our power to bore one hole in it of the size of the lithontriptor, that is, from two to four lines in diameter. It is necessary to seize it, and loosen it a great number of times, which prolongs the operation, and, consequently, the sufferings of the patient; for the seizing of the stone is the most difficult part of the operation for the surgeon, and the most painful for the patient, who generally does not complain during the time we act upon the stone, particularly if the latter has been well isolated from the parietes of the bladder. Repetitions of the operation are always dangerous, when very frequent. "I have found, on trial on a stone out of the bladder, that to destroy one of an inch diameter, and which is pulverized in ten minutes by means of my instruments," (it is M. Meirien who speaks,) "it required to be bored thirty-two times with M. Civiale's; and, even then, there remained fragments which could not have passed through the urethra. It must be noticed also, that as the stone was before me, I could place it in the most favourable positions within the claws of the forceps; which cannot, of course, be so readily done

when it is in the bladder; it happens sometimes, also, that after the stone is loosened, and again seized, the lithontriptor is pushed against a part already bored, and it is necessary once more to alter the position of the stone.

"6th. If, in the common operation for the extraction of the stone, in which the surgeon has it in his power to explore the cavity of the bladder with his finger, he is liable to leave fragments in that viscus, when the stone has been broken by the forceps, the same accident can so much the more readily happen in the new operation; for we do not possess in this the same means of examining the interior of the bladder. In consequence of this, it happens that patients are imperfectly cured. Of the truth of this, I have in my possession many proofs. It is, therefore, essentially necessary that the stone should be completely pulverized."

After stating the preceding objections to M. CIVIALE's instruments, M. MEIRIEN proceeded to give a description of his own. "So many inconveniences," he remarked, "call for modifications. I will not occupy your attention with all the trials I have made; but only with the principal ones, and the last instruments which I employ. I at first constructed an instrument like the forceps of M. LEROY, which is nothing more than the ball extractor of ALPHONSIN. The extremities consisted of spoons, which formed a complete olive at the end of the external sound; but when the stone was voluminous, it was difficult to secure it very firmly. With the view of preventing the læsion of the bladder, I had adapted to the external canula a screw which prevented the complete approximation of the blades. In order to destroy the stone, I made use of a lithontriptor," (or, as he calls it, a *lithorineur;*) "that is, of a stem of steel, terminated by two files, which, being separated and approximated at will, allowed me to destroy a large surface of the calculus. The lithontriptor being withdrawn and replaced at will, through the tube of the forceps, I could very easily inject water, when necessary, into the bladder, without deranging the instruments. Yet there was this inconvenience to the instrument, that it was not always possible to extract all the fragments of the stone. With the view of effecting this, I had made use of forceps similar to those of HUNTER; with this difference, however, that they could bend at an inch from the extremity, so as to explore every part of the bladder. This forceps was pushed into that

viscus, through the tube of the larger forceps, before occupied by the borer: by means of a small screw near the external end of its stem, it could be bent, the blades opened: the fragment being secured, I brought it within the claws of the larger forceps, secured it, withdrew the small forceps, and introduced the lithontriptor. This last instrument (the small forceps) is the only one of that set, which I make use of at present.

"Instead of the three bladed forceps, I now employ one with from six to ten. These blades, like the others, are made of steel, separate from each other, in consequence of their own elasticity, and are brought in opposition by means of a very fine silk cord, passing from one blade to the other, at their extremity, and afterwards communicating exteriorly through the stem. The disposition of the instrument is such that I seize the stone with the greatest facility, and that the fragments that might escape from between the blades into the bladder would always be small enough to pass out through the canal of the urethra. The strength of this instrument is very considerable. It is to be remarked that in all the other instruments there exists a lever of the third species, which is the least advantageous of its kind; because the fulcrum and the power are very near each other, whilst the resistance is at a great distance, which necessitates so much force as to endanger the breaking of the blades. In my instrument, the mechanism is different. Here the power is placed beyond the resistance, by means of the silk placed at the extremity of each blade. The instrument is used with the greatest facility. After having introduced it into the bladder, I open the forceps, sound for the stone, and inject through the stem six ounces of water. Having found the stone, I open the instrument upon it, by merely pushing a screw, which loosens the silk, and I plunge upon the stone, which can no longer escape. I tighten the silk; the blades, in consequence, close beyond the stone, and the latter is now confined within a sort of steel basket.

"There is nothing in my instrument which can wound the bladder or the urethra. In order to seize the calculus, I am compelled, as in the other methods, to place my patient in a fatiguing posture. But, however, when it is once secured in the forceps, I make use of a particular kind of bed, with a peculiar screw, which can be fixed, also, to any table. In this screw, which can be

raised and lowered at will, the instruments may be firmly fixed; so that, while destroying the calculus, the patient experiences no jarring;" which he must necessarily do, when the instruments are merely held by an assistant. Like M. CIVIALE, M. MEIRIEN makes use of the bow in order to put the lithontriptor in motion. "With my instruments," he continues, "I attack the stone on a flat surface; I next turn it, in order to destroy another part of its circumference. The turning is easily effected by loosening the stone, and allowing it to fall in the inverted cone, formed by the blades of the forceps. In this way I proceed to the last, filing the smallest fragment, and reducing the whole to powder."

All the instruments here alluded to by M. M. I saw; and I can vouch for the correctness of his description. They are all really very ingeniously contrived; and if they succeed as well on the living, as they have done here on the dead subject, he will certainly deserve a great deal of credit for the alterations he has made in the instruments already in use: for, to grind down the stone in one, or at most, in two sittings, and to leave no fragments behind, capable of forming the nuclei of future stones, is doubtless a desideratum. But time and experience alone will decide how far M. M. is founded in his high pretensions; for, although he talks pretty largely of what he has accomplished, and of the ease with which he destroys in one sitting a stone of ordinary size, (which has always been the case in his operations,) we have only, so far as I know, his own word for it; whereas M. CIVIALE's success is known to every one, at least in France, and his operations are already very numerous.

You will have remarked, that between M. M.'s forceps and that contrived two or three years ago by Mr. ROBER in Philadelphia, there is a great analogy; for, in both, the blades of the forceps are made to approximate and to secure the stone, by means of a piece of silk cord passing from one to the other. M. M.'s, however, has this great advantage over the other, that the blades instead of being three in number, and forming, with the cord at the extremity, a triangular opening too small to admit a common sized calculus, are eight or ten, and consequently present a circular opening in which almost any stone can enter. Between the blades, also, none but very small fragments can pass; whereas, between those in Mr. ROBER's forceps, large ones can find an exit into the blad-

der. M. M.'s double file resembles also somewhat Mr. LUKENS's, and is certainly, if of sufficient strength, a very excellent one.

M. MEIRIEN showed us, also, several other instruments. Among these were various kinds of grinders, which it would require too much time to describe here. He showed us a sound, made of bell-metal, hollow, curved, and formed, as it were, of rings one in the other. The advantage of this is, that in passing the stone it makes a considerable noise, so that the existence of the latter in the bladder is easily discovered; which is sometimes difficult to do with the ordinary sounds, because they may pass over the stone without the grating being heard. In order to increase the sound, he has adapted a trumpet-like opening at the outer extremity. For this instrument he is entitled, however, as he allows himself, to very little credit; the annular part having been proposed by M. RECAMIER, and the expanded one by M. AMUSSAT. All he has done, is to combine both in one instrument. He also showed us a gum elastic catheter, having in it a steel instrument which he can curve or straighten at will. He uses it to straighten the canal of the urethra when the latter is so curved as not to allow the introduction of a straight sound. He is the inventor of it.

The most curious part of this business, however, is, that M. M., who was bred a physician, and is very well informed in his profession, *manufactures* his own instruments. They are as well made and as delicately finished as any I ever saw in France or America. I will merely add, that, in order to remove the irritability of the parts, which sometimes prevented the injection from being made, M. M. has had recourse to frictions around the anus, or the perineum, &c. with an ointment composed of equal parts of extract of belladonna and simple cerate. He was led to this by the known fact, that this substance causes a dilatation of the pupil.

ANALYTICAL REVIEWS.

ARTICLE XIII.—*Dublin Hospital Reports*, 1827. Concluded.

CONFORMABLY to the promise given in our last number, we shall continue our analysis of this interesting volume. The paper next in order is entitled a "*Report of an Inquiry into the value of Mediate Auscultation as a Method of Diagnosis in Inflammations of the Pleura, Lungs, and Bronchia.* By WILLIAM STRACK, M. D., *Physician in ordinary to Sir P. Dun's Hospital, &c. &c.*" The writer, after adverting to the imperfections of percussion as a method of exploration of the chest, tells us that it still affords "the most useful aid in practising mediate auscultation; the employment of which is not by any means to supersede the use of the former: for it happens, by a very singular coincidence, that the defects of the one method are in most instances accurately supplied by the other; so that, from a combination of both, a degree of certainty, as to the nature of thoracic disease, can be attained, such as is not to be had with respect to affections of any other cavity." Dr. STRACK, is not, however, so sanguine as some of his medical brethren, as to the possibility of distinguishing, by the means just indicated, between inflammation of the mucous, serous, and parenchymatous structures of the thoracic viscera. In acute inflammation, he admits, that it is easy enough to form the diagnosis, provided the practitioner has an opportunity of observing the disease soon after its formation; but the case, he thinks, is widely different, when we are called upon to pronounce a diagnosis in a disease of somewhat protracted standing, as between pneumonia and pleuritis.

We refrain, at this time, from any very minute critical analysis of Dr. STRACK's doubts in this particular; both because we believe that his evidence is rather negative than positive, and because we believe that our readers are not yet familiar enough with the

meaning and value of the signs derived from mediate auscultation to take an interest in the more complex view of the subject. We shall not, however, lose sight of it. Dr. S. is inclined to attach more importance, in certain cases of thoracic disease, to the colour of the face, as a diagnostic evidence. Each of the three inflammations, viz. "pleuritis, pneumonia and bronchitis, possesses, when the disease is at all severe, the characteristic of a peculiar colour of the countenance." Our author mentions the shades of colour which he conceives to be indicative of each of these diseases; and explains at some length the causes of the various colours of the face, particularly of the cheeks. He admits, however, that all this is only applicable to these affections when in an uncomplicated form: when they are complicated with each other, the flush peculiar to each is of course modified by that attendant on the superadded affection. For example, in pleuro-pneumonia, (that is where inflammation of the parenchyma of the lungs is complicated with pleuritis,) we may expect to find the dusky lucid red of pneumonia assuming the place of the florid red of pleuritis; because a moderate degree of inflammation of the lung will produce a greater deviation from the natural colour of the countenance, than the same degree of inflammation of the pleura." "Even in simple pneumonia, it may happen," says Dr. S., "that the colour of the countenance shall approach more to the cast described as peculiar to bronchitis, than to that of genuine pulmonic effusion." In addition to these difficulties in the way of correct diagnosis, from the colours of the cheek, in thoracic inflammations, we would observe, for ourselves, that in cases of hepatic, or gastro-hepatic disease, it is not by any means unusual to see that deep flush which our author insists on as a sign of pneumonia.

The next question discussed, is, which of the three above-mentioned diseases is most liable to become superadded to one of the others; that is, which of the tissues, the serous, parenchymatous, or mucous, is most liable to be consecutively or sympathetically affected by the inflammation spreading from either of the others. Dr. Strack conceives that the extension of disease to the pleura from the mucous membrane, though it does not often happen, is comparatively of much more frequent occurrence, than bronchitis supervening on pleurisy. The very reverse of this opinion

is held by LAENNEC; who, in his great work,* Vol. I. pp. 193-4, tells us, that pulmonary catarrh is commonly complicated with numerous affections of the pleura and pulmonary tissue, of which it is almost always the effect. It is, he asserts, rarely the cause of other thoracic derangements, except emphysema of the lungs, or dilatation of the bronchia.

In the complication of pleurisy with pneumonia, (pleuro-pneumonia,) Dr. S., coinciding with LAENNEC,† regards the pulmonary tissue as the part primarily affected in the major number of these cases. The French pathologist tells us, that there are few instances of simple pneumonia; that is, without the presence of false membranes in some part of the pleura costalis or pulmonalis, or the effusion of serum. He avers also, that the junction of pleurisy with pneumonia diminishes the danger, by the compression on the lung of the effused fluid in the cavity of the pleura, moderating the inflammatory action.

The next question, "whether does inflammation more frequently spread consecutively from the mucous to the parenchymatous, or from the parenchymatous to the mucous structure of the lungs?" is answered both by Drs. STRACK and LAENNEC, "from the parenchymatous to the mucous tissue." Dr. S. concludes his paper, by pointing out the possibility of our mistaking acute pleurisy for an advanced stage of pneumonia, "at least to persons not very perfect in the art of auscultation."

In order to preserve the continuity of subject, we shall next notice the paper consisting of "*Additional Cases from the Medical Wards of the Meath Hospital.* By R. GRAVES, M. D., and WILLIAM STOKES, M. D." These are to be considered, independently of the clinical instruction which they convey in other respects, as affording additional illustration of the value of mediate auscultation. That we may be the better understood in our future remarks on this theme, we shall here present our readers with the terms commonly employed in conducting stethoscopic examination, and the meaning to be attached to them.

I. AUSCULTATION OF RESPIRATION.—The sound of respiration is different, in the pulmonary tissue, from that in the larynx, trachea,

* Traité de L'Auscultation Médiate, et des Maladies des Poumons et du Cœur. Seconde Edition. Paris, 1826.

† Op. citat. p. 221, Vol. II.

and great bronchial trunks. The stethoscope, in the auscultation of the lungs, must be used without its moveable top.

Pulmonary Respiratory Sound, or simply *Respiratory Murmur.*—If the stethoscope be applied to the chest of a healthy person, the examiner will hear, during inspiration and expiration, a low, but very distinct murmur; which indicates the entrance of air into the pulmonary tissue, and its expulsion therefrom. This murmur may be compared to that of a bellows, when the valve or clapper makes no noise; or, still more, to that which would be heard by the naked ear, when produced by an occasional deep inspiration in a profound sleep. It is distinguishable at all parts of the chest, and especially in those regions in which the lungs are nearest the surface; that is, in the antero-superior, lateral, and postero-inferior regions. The hollow of the arm pit, and the space compressed between the clavicle and the superior border of the trapezius muscle, are the points in which the murmur is most perceptible. It is the more sonorous, the more rapid the respiration. In infants, it is quite loud, and readily heard through the thickest clothing. Occasionally this is heard in adults, even in advanced life: it is called *puerile* respiration.

Respiratory Bronchial Sound, or simply *Bronchial Respiration*, is the noise produced by inspiration and expiration, in the larynx, the trachea, and its bifurcations at the root of the lungs; and heard when one end of the stethoscope is applied over the larynx, and the cervical portion of the trachea. In cases of compression or engorgement of the pulmonary tissue, by which the air is prevented from passing into the air cells, the bronchial is the only kind of respiration which is heard. In peripneumony, it is one of the first signs of hepatization, and also of the presence of tubercles at the summit of the lungs.

Cavernous Respiration. This is the term applied to the sound produced, during expiration and inspiration, by an excavation formed out of the substance of the lungs; either by softened tubercles, or gangrene, or abscess. This sound resembles the bronchial respiration. The air penetrates, however, into a more extensive cavity than in the common bronchial branches, and the sound must of course be more audible. If doubt exist as to its nature, attention to the cough and resonance of the voice will solve the difficulty.

Whispering Respiration. In this case, the sound of the patient's breathing seems to be produced by the air directly inspired from the ear applied to the stethoscope. It may be caused by fits of coughing, and even by the modulations of the voice; it takes place also in the large bronchial trunks, whenever the adjoining pulmonary tissue is indurated, or more dense than natural, as in pneumonia. In pulmonary excavations, it always indicates that they are very near the surface of the lungs.

Laennec mentions a variety of this whispering respiration, which he calls the veiled whisper; as if a moveable veil were interposed, between a pulmonary excavation and the ear of the observer.

II. Auscultation of the voice.—The sound, when the patient speaks, striking on the ear applied to the stethoscope, will vary very much in its tone and intensity, according to the state of the pulmonary apparatus at the time. One of the most usual noises is *pectoriloquism.* This consists in the transmission of the voice through the cylinder in a more direct and forcible manner than ordinary; and is produced by tubercles in a state of ulceration, forming cavities, through the dense walls of which, the vibration of the tracheo-bronchial tree is more readily conducted than in the healthy state of the lungs. The resonance of the voice in the different parts of the respiratory organs, whether in their healthy or diseased state, presents numerous varieties, the principal of which are, 1. The resonance of the voice in the pulmonary tissue. 2. In the larynx and trachea. 3. In the large bronchial trunks. 4. In the small bronchial branches. 5. In the excavations accidentally formed in the pulmonary tissue. 6. A peculiar phenomenon to which the term *egophony* is applied. When examining the state of the voice in these cases, the stethoscope is to be used entire, with its top or moveable end properly adjusted to the body of the instrument.

The resonance of the voice, in a healthy subject, is quite indistinct; and only produces a sensation on the ear of a slight humming, corresponding to the vibration felt by the hand on the chest of a person speaking.

The second variety, or *laryngophony*, conveys the impression of the direct transmission of sound from the larynx or trachea, to the ear of the examiner; and prevents his hearing the sounds

coming from the mouth. It resembles pectoriloquism; and will give a person a very good idea of this latter phenomenon, who has not an opportunity of observing it on a diseased subject.

The third variety of the resonance of the voice, or that produced by the large bronchial trunks, is much more obscure. It is ascertained by placing the stethoscope in the inter-scapular region. Here, especially towards the superior internal angle of the scapula, the sound is more distinct than in any other part of the chest; it is not directly transmitted, as in the second variety, through the cylinder, but vibrates with sufficient force against the thoracic extremity of the instrument, to be heard more distinctly than the vocal sounds issuing from the mouth. In thin subjects, and especially children, this sound, called *bronchophony*, is almost as intense as laryngophony.

The resonance of the voice in its fourth variety, or in the minuter divisions of the bronchia, spread through the pulmonary tissue, is, in a healthy state, very trifling. The rarefied air, and the delicate ramifications of the bronchia, now no longer cartilaginous, are bad conductors of sound. But in peripneumony, or extensive engorgement of the lungs, or a collection of tubercles in a small space, the pulmonary tissue, being indurated, produces a resonance analogous to pectoriloquism, and which, by Laennec, is called *accidental bronchophony*. This phenomenon is still more evident, if the induration of the lung has taken place near the root. Dilatation of the bronchia produces the same effect; and the more readily, as it often happens that the pulmonary tissue compressed by the dilated branches, is deprived of air, and rendered more compact than in its natural state. Bronchophony is, however, rarely identified with pectoriloquism, so far as not to be distinguishable by an ear moderately exercised. In the former, the voice seldom traverses the cylinder; its tone resembles somewhat that of a speaking trumpet; its resonance is more diffused, and is evidently heard as from a distance. The cough, and the sonorous inspiration following, also aid in fixing its characters.

Pectoriloquism is the name given to the resonance of the voice in an excavation accidentally formed in the pulmonary tissue; and which may result from various causes. Pectoriloquism is either *perfect*, or *imperfect*, or *doubtful*. It is said to be imperfect, when the transmission of the voice through the instrument is not clear

and direct; it is doubtful, when the resonance is very faint, and when it cannot be distinguished from bronchophony, except by the aid of the signs derived from its situation, the general symptoms, and the march of the disease. The intensity of the pectoriloquism, is not always proportionate to the extent of the excavation; sometimes, where the cavity is very large, and the openings into the bronchial cells narrow, it is quite indistinct. Occasionally, this phenomenon may be suspended for some hours, or even days, by sputa, or softened tuberculous matter, obstructing the communication between the cavity and the bronchia.

Of *Egophony*, called also by LAENNEC *resonnance chevrotante*.—This phenomenon is, of all others made known by auscultation, the most complex. It may be easily confounded, especially by an unpractised ear, with pectoriloquism, and still more readily with bronchophony. Simple egophony consists in a peculiar kind of resonance of the voice, accompanying or following the articulation of words. It seems as if a voice, acuter and sharper than that of the patient, and in a measure silvery, strikes or thrills along the surface of the lung: it is like the echo of the voice of the patient, rather han the voice itself; it rarely passes into the tube, and hardly ever entirely traverses it. It has, according to LAENNEC, a distinctive character, from which he has derived its name; it is trembling and jerking, like that of a goat, and in its tone, it resembles that of this animal. When egophony occurs in the vicinity of a great bronchial ramification, and particularly near the root of the lungs, it is often associated with bronchophony. The union of the two phenomena present numerous varieties, of which, according to the French writer, who is paramount authority on this subject, we may form a pretty accurate idea, by calling to mind the effects, 1. Of the transmission of the voice through a metallic speaking trumpet, or a cracked reed. 2. Of a counter between the teeth and lips of a man, while he is speaking. 3. Of the nasal stammering of the Merry Andrews, who give voice and speech to their hero Punch. This last comparison is often perfectly accurate, especially in persons with a somewhat grave voice. It is common to meet, in the same subject in whom this union of the two phenomena is present at the root of the lungs, simple egophony at the inferior portion of the external border of the scapula. To distinguish well the

sound of egophony from bronchophony, the stethoscope must be applied firmly to the chest of the patient, and the ear of the physician rest lightly on the other end of the instrument.

Laennec assures us that egophony is only exhibited under the following circumstances: 1. In subjects attacked with acute or chronic pleurisy, with an effusion of a moderate amount in the thoracic cavity: 2. In those attacked with hydrothorax, or some other fluid effusion of this cavity. It is commonly manifested at the very commencement of pleurisy; but only becomes decided and loud on the second, third, or fourth days, and rarely before the respiration has become almost insensible, or entirely ceased, and the sound of the chest, on percussion, dull or dead on the affected side. Egophony differs from pectoriloquism, in being always heard over a surface of some extent, whereas the latter is confined to a circumscribed spot or point. It is most generally to be heard in the space comprised between the internal border of the scapula and the spine; in the whole course of the inferior angle of the former bone; and in a zone of about three fingers breadth following the direction of the ribs, and extending from the middle of the scapula to the nipple. Occasionally, it is heard all over the affected side. It is worthy of remark that the points in which the egophony is most distinct, viz. at the inferior angle of the scapula, and between the internal margin of this bone, and the vertebral column, correspond to the part of the lungs in which the most voluminous bronchial branches are met with. This phenomenon may be received as of good augury, in pleurisy, since it indicates a moderate effusion; and its persistence is also favourable, as it shows that there is no increase of the effusion, which, when coming on suddenly, and in large quantity, so as to throw back the lungs against the mediastinum, and also when there is a false membrane without much fluid, prevent the egophony. It may exist, conjoined with bronchophony and pectoriloquism, in cases of pleuro-peripneumonia with abscess of the lungs.

The *cough*, in pulmonary affections, not unfrequently aids the physician in his diagnosis obtained by auscultation. Laennec speaks of the *tubular cough*, in inflamed and hepatized lungs; but we are not so much called on to study its varieties, as to note the strength and intensity of the sounds already designated, when the patient coughs. Thus, during an effort of this nature, the cavernous

rattle, and the *tintement metallique* are more perceptible, and pectoriloquism, before suspended, may by it be restored.

Among the sounds foreign to respiration, and the resonance of the voice, we have, as most worthy of especial consideration, the rattle, (*râle,*) and the *tintement metallique*, terms not readily translatable, and the meaning of which, therefore, must be expressed by a periphrasis. By rattle, is understood the noisy murmur made by a person dying, and caused by the air traversing with difficulty the sputa which can no longer be expelled from the lungs. This noise is produced almost entirely in the larynx and trachea, or, at most, at the origin of the great bronchial trunks, and is hence called, by Laennec, the *tracheal rattle.* It is the only one which can be heard with the naked ear, and even then at a limited distance only; also, it is observed, at its intensity, in aggravated hæmoptysis, and in the paroxysms of the mucous catarrh of old men, which, on such occasions, usually assumes the name of *catarrhus suffocativus.* In the moribund, and especially in those dying from phthisis, peripneumonias, and diseases of the heart, and fevers of a violent character, it is also very intense; and is a bad omen. The ramifications of the bronchia will often furnish to the ear applied to the stethoscope, a noisy rattle, when hardly any murmur could be heard without the instrument. The five principal kinds of rattle are, according to Laennec, 1. The humid rattle, or *crepitation;* 2, the mucous rattle, or *gurgling;* 3, the dry sonorous rattle, or *snoring;* 4, the dry hissing rattle, or *hissing;* 5, the crepitating rattle with large bullæ, or *crackling.*

The *humid crepitating rattle* evidently takes place in the pulmonary tissue, and may be compared to the crepitation of salt put into a pan at a mild heat; or to that caused by the insufflation of a dry bladder; or, better still, to that which is heard when we press between the fingers a portion of healthy lung inflated with air. The mucous rattle, or gurgling, is that which is produced by the passage of air through sputa accumulated in the trachea or bronchia, or through a softened tuberculous matter in an ulcerated cavity of the lungs. It is the "*rale*" of the dying, and which in English, is popularly called "the rattles." This is the only rattle which can be distinguished by the naked ear; and even then, only when, as already observed, it has its seat in the trachea, and its immediate ramifications. By the aid of the stethoscope, it is heard

in every part of the lungs. It is present in pulmonary catarrh, and hæmoptysis, and, not unfrequently, in peripneumony and phthisis pulmonalis.

The *dry sonorous rattle*, or *snoring*, is confined to a limited portion of the lungs. At times the sound resembles that of a man snoring; and at others, it so perfectly imitates the cooing of a turtle-dove, that the physician would be almost tempted to believe that one of these birds was under the patient's bed.

The *crepitating rattle* with large bullæ, or *crackling*, is perfectly analogous in sound to that caused by a dry bladder during its insufflation. It is the pathognomonic sign of emphysema of the lungs, and of their interlobular portions, and, in the latter, is particularly distinct.

The sound called by LAENNEC *tintement metallique* is, he informs us, precisely like that produced by a pin struck against a metallic, or glass, or porcelain cup, or by a grain of sand falling into a vessel of this nature. This phenomenon is not at all dependent on the composition of the stethoscope: it occurs, as well as egophony, if we make use of a cylinder of paper, in place of one of wood. The sound is heard, either when the patient breathes, speaks, or coughs. The *tintement metallique* always depends on the resonance of the air, agitated by respiration, or cough, or the voice, acting on the surface of a liquid, which, with the air, fills a cavity formed by disease. It, consequently, is met with in the following circumstances only; 1. where a serous or purulent effusion co-exists with a pneumo-thorax; 2. when a very extensive tuberculous excavation is only in part filled with a very fluid pus.

LAENNEC points out an analogous phenomenon, which he designates by the term amphoric humming, (*bourdonnement amphorique*,) from its resemblance to the sound produced by blowing into a flagon or pitcher.

As our object, in the preceding paragraphs, has been to furnish to our readers a vocabulary and short explanation of the terms made use of in mediate auscultation of the pulmonary apparatus, we have not thought it proper to specify certain exceptions, modifications, and peculiarities, which will more properly find their place hereafter. On an early occasion, we shall present a summary view of the application of the stethoscope to the study of the

diseases of the heart, and thus complete one of the most important branches of diagnosis.

To return to the 'Additional Cases' of Drs. GRAVES and STOKES. The first one is designated as *Gangrene of the Lung; Dilatation of the Bronchial Tubes; Cavity in the Right Lung; Bronchitis.* The patient, aged twenty-eight years, of a full habit, and well developed thorax, had been, for the last year, subject to palpitation, cough, and pain in the sides.

"He stated, that yesterday evening, (November 1, 1826,) he had a rigor, with increased pains: cough frequent; expectoration of a dark red colour; pulse 144. He lay on the right side. Breath very fetid; and there was a cadaverous smell from the whole body; countenance of a leaden hue; lips livid.

"On percussion, the right side was dull, anteriorly; and, on applying the stethoscope, from about two inches above the mamma, to the inferior portion of the lung, we heard, at each inspiration, a sound similar to that produced by the retraction of a piston; on expiration, an obscure crepitus was audible. About the mamma, there was cavernous respiration, gurgling, and pectoriloquism.

"Over the left lung, the respiration was puerile, with a slight crepitus about the mamma.

"*Diagnosis.—Suppurative inflammation of the lower lobe of the right lung; a cavity anteriorly in the lower part of the middle lobe; slight inflammation of the lower part of the left lung.*"

We omit detailing the treatment; which, however, gave the patient relief; and on the 3d of Nov. he was found lying on his left side, which he stated he had not been able to do for the last six months. Expectoration, about two ounces; purulent, sanious, and presenting the prune juice colour in some degree.

"Thus he continued till the sixth, when a loud muco-crepitating râle was heard over the whole left lung: cavernous respiration evident over a more considerable portion of the right lung, with confused pectoriloquism: posteriorly, the murmur was natural; crepitus in the antero-posterior portion.

"*Diagnosis.—General bronchitis of the left lung; excavation in the right lung increasing.*

7, P. M. Complains of violent pain of the left side; pulse 110, small; distinct crepitus, mixed with sonorous rale, over the postero-inferior part of the left side.

Diagnosis. Pleuro-pneumony of inferior part of the left lung; no effusion into the cavity."

On the 7th November, the crepitus was less audible, and of a

more humid character; sound, on percussion over left mamma, was natural; cavernous respiration less distinct.

8. Last night the patient expectorated a large quantity of blood suddenly; odour of the breath more offensive; gurgling evident over a space of nearly four inches about the right mamma.

9. Felt much better; expectoration resembling the juice of prunes, mixed with grumous blood.

He had two rigors, one on the evening of the 9th, and the other on the 10th; and he expired on the 11th.

Dissection revealed, among other changes, a gangrene of the left lung.

"On detaching it from the diaphragm, the fingers of the operator entered the substance; and a large cavity, capable of containing a moderately sized apple, was found, of a completely gangrenous appearance: from its sides, a blackish sanies flowed in great abundance. The edges of the cavity were ragged, and in a state of deliquescent sphacelus; no bronchial communication could be found; but the affected part was surrounded by a band of hepatization, beyond which the tissue was healthy and crepitating."

The right lung was found inflamed at its superior portion, and part of it solid. An anfractuous cavity was then discovered, having three prolongations, or horns, one extending upwards, another downwards and backwards, and a third to the right side. A yellowish, semifluid matter flowed slowly from the lateral prolongation; but the other parts of the cavity were filled with a substance resembling putrid flax, and exhaling an exceedingly fetid odour. Most of the bronchial tubes in this lung were dilated, forming culs de sac at their terminations, where they were nearly as wide as at their origin. The lining mucous membrane, was of a deep red colour, soft and swollen; no ulceration could be detected. The adhesions of this lung to the pleura were so strong, that, in detaching it, the pleura costalis was torn away.

The mucous membrane of the left bronchial tubes was almost black; this appearance extended to the trachea, and, gradually fading, terminated at the rima glottidis. Some adhesions were found on this side; and the inferior portion of the pleura was highly vascular. The right ventricle was enlarged, soft, and pale; the pericardium presented the white patches of Laennec without adhesions.

The bronchial glands were greatly enlarged, soft, and pale. The liver, kidneys and spleen, were much increased in size. The intestinal mucous membrane healthy.

The reporters of this case lay stress on the rarity of uncircumscribed gangrene of the lungs. LAENNEC states that he met with it but twice in the course of twenty-four years' observation, and that but six cases occurred in the hospitals of Paris, during that period. Hence we may form some idea of its great rarity. The cavity in the left lung answers, in every respect, to the description given by this illustrious author, of uncircumscribed gangrene. (See Vol. I. p. 443, of his last edition.) Reasons plausible enough are given, why the destruction of the lung was not prognosticated before death; the chief ones were, the lowness of the part, resting as it did on the diaphragm, "in the situation, of all others, the most difficult to detect pulmonary disease," and also, because, after the cavity had formed, the bronchial communication was completely obliterated by the band of hepatization found after death. The report is concluded by a notice of "a circumstance well worthy of remark, that, notwithstanding the intense inflammation of the tracheal and laryngeal mucous membrane, the patient never complained of sore throat, nor had any affection of the voice."

The next case is one of "*General Pulmonary Apoplexy*," in a butcher, aged forty-five years, and of a full habit; seized first with violent coughing and hæmoptysis. On the morning after he had been brought to the hospital, the chest was examined by Mr. LEVINGE, the resident pupil, and the following observations made.

"Strong bronchophonia, with diminished respiratory murmur, over the postero-superior part of the right lung; the sound is dull on percussion, while, anteriorly, the left lung sounds well, but the respiratory murmur is not at all distinct; action of the heart strong, and heard over the right side; no indication of disease of the valves.

"From these observations, we thought it probable that a considerable part of the right lung was in a state of engorgement, termed, by LAENNEC, 'pulmonary apoplexy;' that emphysema existed in the left; and that probably there might be hypertrophia of the heart. The patient was removed to the medical wards, where, the next day, we made another observation. We now found the respiratory murmur clearly audible over the left lung, accompanied by a loud sonorous rattle. The bronchophonia, and dimi-

nished respiration in the right, were as on the preceding day; he had no fever, but the pulse was quick and full.

"*Diagnosis.—Pulmonary apoplexy, chiefly affecting the postero-superior part of the right lung; no emphysema; bronchitis; possible hypertrophia.*"

The next day, in a fit of coughing, during which he threw up about two quarts of blood, he died asphyxiated.

Dissection confirmed the correctness of the diagnosis. The authors think, "that, in the last and fatal attack, the hæmorrhage occurred simultaneously in a great number of separate points throughout the pulmonary tissue."

Under the head of "*Diseases of the Skin*," Drs. GRAVES and STOKES give some very excellent directions, illustrated by cases, for the treatment of psoriasis, squamous diseases, chronic pustular and tubercular affections, and porrigo of the scalp, or scald head. They display their powers of observation and nice discrimination, in their advising venesection from the arm, and the application of leeches to the diseased part, followed by poultices, prior to the use of the common stimulating ointments and washes, which are prescribed by most physicians, as things of course. "In every instance, let the practitioner remember, that the formation of pustules on the scalp, is the result of an inflammatory process, be the case recent or chronic, and of course ought to be met by local antiphlogistic remedies." In several cases of scald head, where circumstances had prevented our authors from having recourse to leeches in the first instance, they substituted with advantage, poultices, with an ounce or two of liquor acetatis plumbi. In one case only, did the continued use of the acetate of lead produce symptoms like the colica pictonum.

In speaking of the "*Propagation of Inflammation by Contiguity*," Drs. GRAVES and STOKES give some curious examples; as in that portion of the omentum being inflamed, which lay exactly over the inflamed portions of the intestines; in the transmission of inflammation from the pleura of the ribs, to the pleura of the lungs, directly opposite to, and in contact with it; and in that portion of the peritoneum lining the abdominal parietes, being most inflamed, in those parts which had been in contact with the most inflamed portions of the intestines. Their explanation of these facts is, that the membrane first diseased, is altered in its sensible properties, and acts as a foreign body and morbid stimulus to the

opposite membrane, or that in contact with it. "This explanation seems at least more satisfactory, than Mr. HUNTER's sympathy of contiguity."

After detailing a "Fatal Case of sloughing of the Mouth and Palate, from a small dose of Calomel," the physicians of the Meath Hospital, tell us of their having "laid it down as a *rule, that all cases of sudden and violent affection of the mouth after small doses of mercury*, require immediate attention and care." Following up their resolution by practice, founded on principles, they directed, in the case of a girl salivated by mercurial unction of the head, for porrigo capitis, and in whom the inflammation of the jaws, face, and mouth, had made most formidable progress, "*frequently repeated application of leeches* to the most swollen parts. The bleeding from the leech bites was encouraged by emollient poultices. None of the stimulating gargles usually so injudiciously recommended in excessive salivation, were allowed, and the antiphlogistic regimen was enjoined. The beneficial effects of this treatment were very satisfactory, and quickly averted the threatened danger." The authors of the report have since been informed, that Dr. CHEYNE was in the habit of pursuing a similar practice for the purpose of diminishing excessive salivation.

In resuming the regular order of analysis, we meet with the "*Medical Report on the Feigned Diseases of Soldiers:* in a letter addressed to GEORGE RENNY, Esq., M. D., Director General of Military Hospitals in Ireland, &c. By JOHN CHEYNE, Esq., Physician General." The contents of this paper are valuable to all classes of medical practitioners, but are of especial moment to army and navy surgeons. It reveals a system of deception of a most extraordinary nature; in which soldiers, for the sake of procuring their discharge, will submit to every kind of bodily suffering, while under medical treatment for simulated diseases. At times, they have voluntarily maimed themselves, at the cost of a limb, or an eye, and at the imminent hazard of life itself. Dr. CHEYNE gives instances of pretended diseases and abdominal discharges in persons in civil life, which, on these occasions, seem to be as great adepts at simulation as the military cheats, or *malingerers*, as they are technically called. After speaking of the great increase of ophthalmia, in the 50th regiment, in the years 1804 and

1805, caused by the application of irritants to the eyes by the soldiers themselves, Dr. C. continues as follows:

"As allusion has been made to ophthalmia, I may take the present opportunity of observing, that I never saw a more humiliating picture of depravity, or perversion of reason, call it what we may, than I have witnessed in a ward filled with soldiers, labouring under that disease; most of the cases, as I learned from a surgeon in attendance, being fictitious. The methods, by which inflammation of the eye is produced and maintained, have not all been brought to light; but quick-lime, infusion of tobacco, the gonorrhæal discharge, cantharides ointment, nitrate of silver, blue stone, and other metallic salts, are probably among the most common irritants employed. Inflammation thus caused, is most painful, and is kept up under every privation which can make life miserable; locked up in a dark ward, and permitted to have intercourse only with the officers of the hospital, nurses, and orderlies, confined to diet which, from the absence of every stimulating material, is most disrelishing, suffering under painful external applications, and nauseating internal medicines, phlebotomized and leeched till their complexions are bloodless, their pulse hæmorrhagic, and the frightful train of nervous symptoms, which excessive blood-letting produces, is established in the system. All these evils, in many cases, have no effect but to confirm the soldier in his determination to destroy one or both of his eyes, that he may be dismissed from the service with the chance of a small pension.

"Wonderful, indeed, is the obstinacy which some malingerers evince. Night and day they will remain, with the endurance of a fakir, in a position the most irksome. For weeks or months many men have, with surprising resolution, sat and walked with their body bent double. Some have continued to irritate sores in the leg, until the case became so bad as to require amputation of the limb; and many instances have occurred, in Military and Naval Hospitals, of fictitious complaints ending fatally.

"Perversion of reason, rather than the attainment of a discharge, or the evasion of duty, would sometimes appear to give rise to the simulation of disease. Soldiers, I have no doubt, are often actuated by the same wayward fancies, so perplexing to the physician, which influence hypochondriac or hysterical patients, in the middling and upper ranks of life. I have known some persons, in seeming health, who have been hindered, solely by its expensiveness, from indulging in a medical visit daily. I knew one lady of high rank, who, whether sick or well, required a visit from her physician every morning. Many are induced to complain, from a froward humour, to annoy their relations or dependents, sometimes merely to obtain sympathy. I know a female who long pretended to be consumptive. By voluntary efforts, she coughed incessantly during my visits; and she was twice observed inserting a pin between her gums and teeth, whence she sucked blood, that she might present her handkerchief stained with blood,

at my visit, which she did for several weeks. Some females have pretended that they have had no menstrual discharge for many months, while their perfect regularity was ascertained. I have known a patient aver that no discharge had taken place from the bowels for an unprecedented time: in this case, it was afterwards discovered that the fæces were consumed in the fire every night. Some have affected a loss of the power of expelling urine: some have pretended to be without the least appetite for food—that they had eaten nothing nutritious, for I do not know how long, at the same time that they were supplying the cravings of hunger by stealth. Substances have often been presented, which it has been alleged were vomited, discharged from the bowels, or bladder, which were not the product of any animal process. A similar caprice will often influence the conduct of the soldier; who, without any ulterior object, will experience some unaccountable gratification in deceiving his officers, comrades, or surgeon."

Dr. Cheyne very properly, however, points out, as a caution against the physician becoming too suspicious of the reported sick being malingerers, cases, which have come to his knowledge, of affections of the brain, thorax, and abdomen, and diseases of the hip-joint, at first supposed to be feigned, which eventually proved genuine, and terminated in death or incurable disease. He next proceeds to enumerate the diseases, in the *province of the physician*, which soldiers most frequently feign; and subsequently offers a few remarks, which may be useful to the inexperienced in leading them to a discovery of fraud.

Diseases of the Brain and Nervous system. 1. *Paralysis.* Palsy of one of the extremities. Loss of hearing—of speech.—Nyctalopia. Loss of the command of the sphincters. 2. *Vertigo.* 3. *Head-ach.* 4. *Epilepsy.* 5. *Mania.—Diseases of the Thoracic Viscera.* 6. *Hæmoptoe.* 7. *Phthisis.* 8. *Diseased Heart.* 9. *Syncope.—Diseases of the Abdominal Viscera.* 10. *Vomiting.* 11. *Tympany.* 12. *Dysentery.* 13. *Chronic Hepatitis.—General Diseases.* 14. *Fevers.* 15. *Rheumatism.* 16. *Dropsy.* In his remarks under each of these heads, the writer gives much pertinent advice, mingled with singular, and, at times, amusing instances of deception. In reference to those who simulate palsy and rheumatism, he tells us that they more frequently yield to the electric shock than to any other remedy.

"Some there are, however, who have triumphed over every attempt which has been made to overcome their unprincipled obstinacy. About twenty years ago, a trooper, belonging to the 12th, who pretended that he

had lost the use of his right arm, after resisting, for a great length of time, severe hospital discipline, as well as every effort of the adjutant to make him return to his duty, succeeded in procuring his discharge. When he was leaving the regiment, and was fairly seated on the top of the coach, he waved the *paralytic* arm in triumph, and cheered at the success of his plans."

We regret not having space to make additional copious extracts from Dr. CHEYNE's long and interesting letter.

The Second Part of the Reports opens with a paper entitled, "*Cases of the Excision of Carious Joints.* By PHILIP CRAMPTON, F. R. S., Surgeon General to the Forces in Ireland, and Surgeon in Ordinary to the King." The extended reputation of Mr. CRAMPTON as a surgeon, will suffer no diminution from a perusal of the histories of these cases; which have been already transferred to the surgical department of our Quarterly Summary. (vol. iv. p. 186—90.) The author concludes his paper by the following remarks:

"Without venturing to define the cases in which excision of the joint is to be preferred to amputation of the limb, I think I may venture to predict, that, if I should be so fortunate as to direct the attention of the profession to the subject, a great number of limbs will be preserved, which otherwise would have been sacrificed, and that, before long, in the *generality* of incurable accidents and diseases of the shoulder, elbow, and ancle joints, excision of the joints will be preferred to amputation of a limb; and even in the knee, the operation of excision will *sometimes* be considered more eligible than amputation of the thigh."

For ourselves, we must confess that we are not so sanguine, in our hopes of the successful result of excision of carious joints. Mr. CRAMPTON succeeded completely, in a case of diseased elbow; cutting off the lower extremity of the humerus; but the articulating surfaces of the radius and ulna were healthy, and he contented himself with removing the olecranon, the cartilage covering which was partially eroded. In the operation of the excision of the knee-joint, he found it necessary to saw off about four inches and a quarter of the lower end of the femur, and to pare away about half an inch of the head of the tibia. The patient, a female, was discharged from the hospital, thirteen months afterwards, (June, 1824,) in very good health; but no bony union had taken place between the femur and tibia. In the winter of 1825—6, she was again in a wretched state of health: she had no pain in

the limb, but there was a general thickening about the joint, as if the disease had been reproduced, and the sinus of the ham continued to discharge a thin, whey-coloured matter. She died in the month of July, 1826, just three years and two months after the operation. Mr. CRAMPTON in his 'Observations' on this case holds the following language.

"It is plain that this operation, so far, at least, as related to the preservation of the uses of the limb, completely failed. It served to prove, however, in the most satisfactory manner, that the excision, even of so large an articulation as the knee-joint, might be performed with safety; and gave strong grounds to hope that, under more favourable circumstances, the operation might be attended with success."

His expectations were realized in the next case, of a young woman, aged 22, presenting no peculiar marks of a strumous habit. The operation for excision of the extremity of the femur, and removal of the patella, and paring away the greater part of the articulating cartilage of the tibia, was performed on the 4th of August, 1823. In the month of October, 1824, the woman walked a distance of nearly five miles. She was in excellent health—the limb perfectly firm, though bowed outwards. In November, 1824, Mr. C. saw her, and found the limb perfectly consolidated.

We have seen but two cases of excision of carious joints, both of these of the elbow. In one, the operation was performed by M. DUPUYTREN at the Hotel Dieu, in the early part of the summer of 1819, on a young man of a scrofulous habit. After four months had passed, M. D. thought it adviseable, on account of the irritation and discharge from openings where the two ends had imperfectly united, to amputate the limb at the middle of the humerus. A deep abscess, extending down the fore-arm, was discovered. The second was also a young man in La Charité, operated on, about the same time, (June 30th,) by M. ROUX. After the lapse of a twelvemonth, he was still in the hospital, with his arm discharging, owing to the formation of successive sinuses. Our departure from Paris prevented our seeing the termination of this case, nor have we learned its history since.

The next paper is "*On the Form, Construction and Use of a Cataract Needle of a particular Description, employed by* ARTHUR JACOB, M. D., Member of the Royal College of Surgeons in Ireland; Surgeon to Sir Patrick Dun's Hospital; and Lecturer on Anatomy and

Surgery in the Medico-Chirurgical School, Park Street." Prior to his giving a description of his cataract needle, Dr. Jacob recapitulates the arguments which have been used, in favour of that operation to which he considers his instrument as particularly applicable. The operation here alluded to, is that of opening the texture of the lens, to produce its absorption, by exposing it to the action of the aqueous humour. The fact, that cataract may be removed by absorption in this way, was first pointed out by Mr. Pott; and the suggestion has been since repeatedly carried into effect, first by Mr. Saunders, and afterwards by many distinguished oculists. The arguments in its favour are, the facility of the operation, and the little injury inflicted on the organ, so that it may be repeated frequently without injury. The question often agitated, respecting the choice to be made between the anterior and posterior operations—that is to say, whether the needle should be introduced anterior to the iris, through the cornea, or posterior to it, through the sclerotica, is not yet settled. Mr. Saunders says, the surgeon has more power in the posterior than the anterior operation; but *the latter excites less pain and inflammation*, and inflicts a slighter, if any injury on the vitreous humour. Dr. Jacob gives it the preference. He reprehends the practice of Sir W. Adams, of breaking down the lens, and placing the fragments in the anterior chamber, to accomplish their solution and absorption; and gives, as a contrasted opinion, that of Mr. Saunders, that the process of the absorption of the lens is best accomplished in its natural position. The common period for the cure of congenital cataract by this means, is, according to our author, from two to five months; and the number of times in which the operation is performed, must, of course, vary from one to five.

To attain the desirable objects, of fineness of point, and curvature at the extremity of the instrument, and of a form, such that the aqueous humour shall not escape, and no mark be left on the cornea, Dr. Jacob recommends a fine sewing needle, curved at the point. His preference is founded on having used it in about forty operations. He could produce examples, where it has been three times introduced, and where not the slightest speck on the cornea can be detected. The chief difficulty in the use of the round needle, is the force which is required to pass it into the cornea; but this is soon surmounted by a little practice.

"The size of the needle is known in the shops as *number seven;* being the forty-fourth part of an inch in diameter, and about one half the size of the finest SAUNDERS's needle which is made. The point can be turned to the requisite curve, by means of a pair of cutting forceps, or the ward of a small key; of course, without heat, which would destroy the temper."

Not more than ten in a hundred needles will bear bending thus; but when once turned, they retain the curve without any danger of breaking or bending.

"They should always be tried before use, by passing them repeatedly through thick calves-skin leather. After they have received the requisite curve, the point should be cut flat on each side, on a fine hone, and carefully examined with a magnifying glass to ascertain that it is perfect.

"After the point has been turned, the needle, held in the jaws of a pair of pliers, or a vice, is to be run down into a cedar handle, without cement; leaving only *half an inch* of blade, which I have found to answer every purpose."

The handle should be about a fifth of an inch in diameter, and four inches long. The same needle has been used a dozen times without sharpening. Those using the instrument for the first time are recommended to choose one slightly curved.

Dr. JACOB, in place of following the usual advice of ophthalmic surgeons, to operate on the right eye with the left hand, supposing the operator to sit in front of the patient, prefers standing behind, with the head resting against his chest. We have not room for other details, respecting the occasional difficulties and dangers attendant on this operation; as most oculists are apprized of, and prepared for, such obstructions in the way of their success.

We have, by the same author, "*Observations, respecting an Ulcer of a peculiar character, which attacks the Eyelids, and other parts of the Face.*" This disease is peculiar in its nature, and not to be confounded with genuine *carcinoma*, or with the disease called *lupus* or *noli me tangere*. The author tells us more frequently what it is not than describes clearly what it is. He thinks it will bid defiance to all remedies short of extirpation. He has tried, internally, alterative mercurials, antimony, sarsaparilla, acids, cicuta, arsenic, iron and other remedies; and locally, simple and compound poultices, ointments and washes, containing mercury, lead, zinc, copper, arsenic, sulphur, tar, cicuta, opium, belladonna, nitrate of silver, and acids, without arresting for a moment the progress of the disease.

Following this is a "*Second Communication, relative to the Fatal Consequences which result from Slight Wounds received in Dissection.* By A. Colles, M. D., one of the Professors of Anatomy and Surgery in the Royal College of Surgeons in Ireland." This paper mainly consists of an account of the case of a Mr. Shekelton; who, on the 28th May, 1824, pricked himself with the point of a knife, while examining the body of a man who had died of peritoneal inflammation, consequent on the operation of lithotomy. On the following evening, Mr. S. felt himself unwell. On the 21st, Mr. Cusack accidentally saw him, and found some of the glands swelled in the left axilla. On the 22nd, the condition of these glands was much improved; but, on the morning of the 23d, there was a return of swelling, with hardness, anxiety, and pain along the course of the ulnar nerve, and down the left side of the thorax. The disease continued to increase in violence; and, on the evening of the 25th, a red spot, of the size of a shilling, appeared on the right patella; accompanied by the severest torture in the knee, referred by the patient to the cavity of the joint. During the night of the 26th, a large red and swollen patch was observed over the right tibialis anticus muscle. On the 27th, he complained of pain of his left arm, with considerable swelling of it, and of the fore-arm. Yellowness of skin was now universal, and more deep than before; adnatæ of the eyes very yellow; countenance more sharp and contracted; tongue covered with a thick coating of white mucus. During the night he passed a large quantity of urine, of a peculiarly dark brown colour. And, though twice he was supposed to be dying, yet he soon after called for solid nourishment; ate a tea-cup-ful of panada, and took the yolk of an egg, beat up with brandy.

He died at nine o'clock, on the 28th, ten days after the accident.

Waving, for the present, all discussions respecting the precise nature of the inflammation of which Mr. Shekelton died, we can only give the plan suggested by Dr. Colles, in such cases. It consists in the administration of calomel, in an uncombined form, and in doses of three grains, every three or four hours. When administered in this manner, it seldom fails to produce salivation in thirty-six, or forty-eight hours; provided that the two or three

first doses affect the bowels. If they do not, some purgative must be combined with the calomel, or occasionally interposed.

"*Cases of a Fatal Erethism of the Stomach, with Observations.* By JOHN CHEYNE, M. D., Physician General." The detail of these cases, as furnished by Dr. CHEYNE, possesses considerable interest; not on account of any novelty or success in therapeutical treatment, but as justifying fully certain inferences, which the ever busy polypharmaceutical physician will do well to hold in mind. Of the propriety of the title, Erethism of the Stomach, we are not well assured; nor do we profess to understand what is meant by the phrase of the tongue "becoming gradually *angry* at the edge." The three first cases, designated by the author as A, B, and C, were marked by obstinate and incurable irritability of the stomach, and a vomiting of ropy fluid, of the colour of verdigris, —thirst urgent—abdomen without pain, tension, or tenderness, except in case C, in which pressure on the stomach caused uneasiness—and the pulse, variable, hard, and frequent in one, and but little altered in the others. The first was an athletic young man, nineteen years of age, of an ardent disposition, and sanguineo-choleric temperament; who was taken ill on the 11th of August, 1818, and died on the 24th. On the 23d, he had black vomit; hæmorrhage from the nose and throat; and blood passed by stool. The second was a case of a young lady, seventeen years of age, who died on the fifth day of the disease: her tongue was white, the edges were clean and florid, and the throat was sore. The third case, age not given, died in ten days after Dr. CHEYNE had been called in. He had, however, been affected with occasional sickness and vomiting of every kind of food, for fourteen days preceding. His tongue was swollen, furred, and dry in the centre—throat inflamed, and towards the conclusion, became completely aphthous. Bleeding at the arm, at first of 30 oz., and afterwards, 16 oz.; opium and calomel; saline preparations; blisters; laudanum, by the mouth, and in glysters; saline draughts; infusion of mint; leeches to the abdomen, &c.; "all, and many other remedies and nostrums, in vain," were had recourse to in the first case. Twenty leeches to the abdomen were the chief remedial means in the second. Blisters to the epigastrium and abdomen; leeches to the anus; enemata; lemon ice, and iced water in sips or mouthfuls, were the means chiefly relied on in the

third case. In the subject of this last alone, was post mortem examination instituted.

"The body was emaciated; the abdomen retracted. The gall bladder was full of dark bile; the stomach, large and flaccid, contained nearly a pint of green fluid. Its mucous membrane presented a peculiar appearance; the veins were unusually turgid; the surface, particularly at the great extremity, was of a dark mahogany colour; the colour was owing to a vascular distension, and general extravasation into the sub-mucous tissue. The same appearance of vascular distension and extravasation, but in a less degree, was observable in the intestines. The mucous membrane of the œsophagus was of a deep red colour, and highly vascular."

The fourth case, D, was of a young gentleman, twenty years of age, of a choleric temperament, narrow chest, and muscular limbs. He was taken sick on the 30th of May, and was convalescent on the 3d of June. The pain of the abdomen, not very acute, was increased on pressure, and attended with sickness, and vomiting of a bright green fluid, which frequently recurred in the course of the night. On the next day, (May 31st,) the pulse was about 86; the tongue furred and rather swollen, but moist: he vomited between a pint and a quart of an amber coloured fluid, in consistence like melted jelly, which he said was tart, but not bitter.

The subjects of these cases were three brothers and a sister. The family to which they belonged, consisted of six children, two of whom had died of the same complaint, as far as Dr. Cheyne could learn by inquiry; and it is further remarkable, that the father of this family died in a similar manner. The green fluid vomited by the above patients, was, as Dr. C. thinks, the product of the stomach, and not of the liver. Summing up his opinion of the treatment which he pursued, he does not think blood-letting was advantageous in case A, any more than salivation, which was produced in the same case without any decided benefit. In case B, the patient seemed to sink from the effusion of blood; an occurrence by no means unusual, when bleeding after the application of leeches is not timely suppressed. The following sensible remarks are those to which we had more special allusion when speaking of the lovers of polypharmacy.

"Having had many opportunities of seeing the irritable stomachs of children, (which purgatives often only exasperate, and thus perpetuate and extend,) brought, in a day or two, to a quiescent state by mere abstinence,

by restricting the patient to water, or weak lemonade in small quantities, and occasionally giving a few grapes, a mode of practice, which, when there is no fulness of the hypochondria, will sometimes be found eminently successful, I resolved, when I came to treat the subject of case D, to give him no active medicine; and had he not been anxious to take the solution of Rochelle salts, with soda and lemon juice, as finding it grateful to his stomach, my intention was to apply blisters and extensive fomentations, to have enemata administered, to permit him to drink lemonade sparingly, and to withhold all medicine by the mouth."

Dr. CHEYNE does not mean, however, by these observations, to advocate inertness in the treatment of genuine inflammation of the stomach; with a case of which he furnishes us, where he had the patient bled to the amount of upwards of 60 ounces in twenty-four hours.

"In idiopathic inflammation of the internal surface of the stomach, or when that surface becomes inflamed, in the progress of dysentery, gout, or other diseases, I have often directed entire abstinence from medicine of every description, and from fluids even of the blandest nature; until the inflammation has been removed by bleeding, blistering, fomentations, &c. In truth, the inflamed stomach is often incapable of retaining even a spoonful of cold water; and at first every description of medicine produces an aggravation of sickness, vomiting, and general distress. In such cases, I have repeatedly witnessed the good effects of restraining the patient from drinking, and of withholding medicine for one, or even two days.

"If thirst be urgent, as is often the case in inflammation of the mucous membrane of the stomach,—most painfully urgent it often is,—it may be assuaged by one mouthful of water, or by putting a bit of ice in the mouth: if there is much *dry retching*, a drink consisting of water, lime water, and milk, in equal proportions, may be given, which, while it quenches thirst, will sometimes lessen the straining to vomit: if these things fail, we may try a remedy of an opposite kind, namely, weak lemonade, which will often give great relief.

"The same method is applicable to excessive irritability of the stomach in continued fever, when that symptom arises from an inflammatory state of the mucous membrane of that organ; which may take place, either with the epigastrium and hypochondria tumid, or without the slightest fulness of the abdomen. In either case, before we prescribe purgative medicines, let us consider well whether they are likely to produce a *salutary* increase of secretion; or whether it would not be better, before having recourse to these, first to reduce the inflammation of the stomach by leeches, fomentation, blisters, and enemata."

This last is perhaps a fortuitous coincidence of opinion, rather than an echo, of that of the BROUSSAIS or physiological school.

The blisters would most likely be objected to by the latter; who might perhaps be also tempted to add, that the reduction of the inflammation of the stomach would be so complete by the use of leeches, fomentations, enemata, and diluents, as not to call for, except *pro formâ antiquâ*, the administration of purgatives at all.

Dr. CHEYNE, in a note, corroborates what has been often said before, viz. that very acute inflammation of the mucous membrane of the intestinal canal, often exists without tension, or the slightest tenderness of the abdomen. He enumerates certain diseases, with some one of which many members of families were affected, in whom there was an exalted strumous diathesis. These are *hydrocephalus*, *mania*, *epilepsy*, *creeping palsy*, *consumption*. There is not, we believe, any novelty or doubt in facts of this nature.

The "*Case of a Remarkable Pulsation in the Veins*," recorded by CHARLES DAVIS, M. D., member of the Royal College of Surgeons in Ireland, and Surgeon to the North East Dispensary, Dublin, is interesting, both to the practical physician, and the experimental physiologist.

"The pulsation in all the veins was distinct and well marked, synchronous with that of the arteries; and, in the veins of the extremities, perceptible to the eye, even at the distance of two yards.

"The veins were rather larger than is usual at her period of life: and pressure upon any of them stopped the pulsation between the part compressed and the heart; so that it obviously could not be caused by regurgitation from the auricle.

"The pulsation of the heart was somewhat stronger than usual at her age; the pulsation of the veins was softer than that of the arteries; and was completely stopped on compression of these latter vessels."

The subject of this case was a female child, aged six years, who was suffering, at the time, from acute hydrocephalus; of which she died, 28th June, 1826.

On dissection, "the vessels of the pia mater, particularly towards the base of the brain, were somewhat fuller of blood than is natural; and the substance of the brain little, if at all, softer than is usual at this period of life. The ventricles contained at least 4 oz. of transparent fluid; and the choroid plexus seemed pale, as if macerated. The pericardium contained a small quantity of serous fluid; and the left ventricle of the heart was somewhat enlarged, and firmer than natural: all the other viscera of the thorax and abdomen healthy. The arteries had been injected; but presented no preternatural communication whatever with the veins; neither could any

artery be discovered in the immediate vicinity of these latter vessels, which could throw a doubt on the fact, that the pulsation had been continued from the heart, through the arteries and capillaries to the veins."

In this case we see a confirmation of the doctrine, which teaches the paramount influence exerted by the heart in the function of the circulation, and that all other agencies are of a purely accessory and secondary nature.

Dr. CRAMPTON, Professor of Materia Medica; Honorary Fellow of the College of Physicians; Physician to Steevens's Hospital, &c. &c., gives us a paper containing an account of a "*Case of Unusual Constipation.*" The subject, a female, had a slight attack of scarlatina, and is of a phthisical habit and appearance.

"She is now in her 37th year; and has been in the state described, for the last seven years. For the last eight months, she has had no passage from the bowels, and only two or three during the preceding year; and she scarcely passes any urine. There is no possibility that any deceit can be practised; as she sleeps in a room with a confidential attendant, and is watched closely by her parents and sister. She never makes the slightest locomotive exertions with her lower limbs; but has the complete muscular power of the upper extremities."

Dr. CRAMPTON gives some cases analogous to this one.

Following this is an "*Account of an Unusual Variety in the Femoral Artery.* By JOHN HOUSTON, Conservator of the Museum, and Member of the Royal College of Surgeons in Ireland." We deem it needless to present the details of this anatomical curiosity to our readers. Such a deviation from the usual situation and distribution of the artery, must, doubtless, increase the difficulties which the surgeon will have to encounter in operating: but, as he cannot be apprized of such an anomaly by any known external signs, he must only, in this, as in all sudden and unforeseen cases, be calm and collected, and ready to modify his practice, according to the exigencies of the moment.

"*A case of Un-united Fracture of the Tibia, treated successfully by the Seton.* By JOHN BROWN, Esq., M. D., Surgeon to the County of Meath Infirmary, &c." was referred to in our Surgical department for the 4th vol. p. 190. We could have wished that Doctor and Squire BROWN (why the first is not sufficiently honourable for a medical man, we are at a loss to a conjecture) had distinctly avowed the obligations of modern surgery to Doctor PHYSICK, for

his introduction and successful use of the seton to promote and effect the union of a fractured bone.

"*Description of a Human Stomach of a Singular Form and Structure.* By JOHN HART, Member of the Royal College of Surgeons in Ireland, Demonstrator of Anatomy at the Park Street School of Anatomy, &c." In this *actum curiosum naturæ*, the left extremity of the stomach had its usual appearance as to form and size; but the right extremity, instead of contracting until it became continuous with the duodenum, after the ordinary way, ended in a culde-sac, about half as large, to appearance, as the great end of the left extremity. The duodenum proceeded from a depression, which marked the less arch of the stomach, about mid-way between its cardiac orifice, and the most remote part of its right extremity. The reporter did not know the history of the individual whose stomach was thus constituted.

We have already noticed (see vol. iv. p. 415, of this Journal) the paper entitled, "*Observations on an Affection of the Mouth in Children.* By THOMAS CUMING, M. D., Licentiate of the King's and Queen's College of Physicians, Assistant Physician to the Institution for the Diseases of Children, and one of the Physicians to the Wellesley Fever Hospital."

Next follows "*A case of Ruptured Cœcum, which terminated in Death, forty-eight hours after the accident.* By JOHN SPEER, Surgeon to the Essex Convict-Hulk, Kingstown, Dublin." The sufferer, named Burn, in wrestling with a man, whom he had thrown to the ground, fell, with his abdomen on his antagonist's knees, which were bent upwards; and received a violent contusion, chiefly on the region of the umbilicus. According to his own account, he felt as if something had given way internally; he fainted immediately, but soon recovered, complaining of severe pain in his abdomen, with vomiting. These symptoms continued until his death. On dissection, was found, an aperture in the cæcum of about two inches in circumference, with uneven, ragged edges, and evidently the consequence of the fall he had received: it was surrounded with marks of extensive inflammation; as were all the small intestines, on whose surface several layers of coagulable lymph had been deposited in different places, forming a false membrane of a soft texture.

"*Cases of Diseases of the Heart, accompanied by Pathological Observations.* By ROBERT ADAMS, A. B., Member of the Royal College of Surgeons in Ireland, and one of the Surgeons to Jervis Street Infirmary, &c." This is a very valuable paper, in which the author evinces powers of observation and industry, which cannot but be highly creditable to himself, as they will assuredly be to the profession. His references to other pathological inquirers and writers are apposite; and serve to illustrate, without ostentation, his own opinions and practice.

His plan is to consider, first, some morbid affections of the membranous coverings of the heart; secondly, those changes which he has observed its muscular structure to undergo; and lastly, to describe and exemplify by cases, those organic alterations of the auricular and arterial openings of the ventricles, which he has remarked as, more than all others, deranging the function of the circulation."

I. *Morbid Affections of the Membranous Coverings of the Heart.* After pointing out the structure of the pericardium, as belonging to the fibro-serous class of membranes, and composed of two layers, differing from each other widely in their structure and uses, and very differently affected by disease, Mr. ADAMS goes on to speak of the morbid affections of the outer layer or *fibrous membrane.* Like the dura mater and fibrous membranes, generally, this is liable to ossification. Mr. A. relates a case of this nature, which he had an opportunity of verifying by dissection. The heart was encircled, or nearly so, by a zone of bone, about three inches in thickness, and more than an inch in breadth.

Under the head of "*Morbid Affections of the Serous Membrane,*" our author treats of pericarditis in its acute form, and by *metastasis of acute rheumatic inflammation from the synovial membranes of the extremities to the serous membrane of the heart.* Here he cautions us against confounding simple rheumatism of the muscular structure of the heart, with rheumatic inflammation of its serous membrane. We have doubts about there being any such malady as rheumatism of the muscular tissue of any part. We believe that, in all the alleged cases of this nature, it is the aponeurotic sheaths of the muscle or envelopes of the muscular fibrils which are the seat of the inflammation. The difference then, to our minds, between carditis and pericarditis, is in degree, and not in

kind; the former consisting of an inflammation of isolated aponeurotic and cellular connexions of the muscle, the latter of an extended and continuous membrane.

"Erysipelas undoubtedly affects the heart. I have myself known," says Mr. Adams, "two cases of erysipelas of the head and face, which terminated fatally, by metastasis to the heart. In one, the erysipelas succeeded to a wound in the head; in the other, it came on spontaneously. In both, as soon as the external redness receded, the breathing became distressed, the countenance agitated, and rest in the horizontal position impossible."

II. *Of Changes Affecting the Muscular Structure of the Heart.* Cases are given of *active enlargement of the heart without any valvular disease*, which terminated fatally, and their precise nature ascertained by dissection. The details of the symptoms and treatment, though interesting, cannot, for want of room, be laid before our readers.

In the second case, great benefit, for a time, was derived from rigid abstinence and a strict antiphlogistic regimen, the least departure from which brought back a renewal of the symptoms. The pulse was, in both, strong, full, and vigorous, and for the most part, regular.

The next case strikingly elucidates the connexion between apoplexy and active enlargement of the heart. The subject of this case had, in February, 1822, an apoplectic seizure; from which he was recovered by free venesection. In April he was again taken alarmingly ill—his countenance ghastly, his pulse weak and rapid, his extremities cold. He lived but fourteen hours.

Dissection exhibited the brain of a yellowish colour, and somewhat looser in its texture than natural; but there were no apoplectic cells, no effusion of blood, nor appearance of there ever having been any sanguineous extravasation. There was discovered a rent in the aorta about a quarter of an inch in length, from which blood had escaped into the pericardium. The whole heart was greatly enlarged, and the left ventricle was much increased in thickness; the heart was otherwise natural, and the remaining viscera were sound.

A case is furnished by Mr. Adams, of a person who, during a period of seven years, had at least twenty apoplectic attacks. After death, the heart was found in a great measure converted into

fat. The liver was natural; the vena portæ was unusually distended.

Of Rupture of the Heart, Aneurism, and Rupture of the Chordæ Tendineæ. Cases illustrative of these organic alterations are given by our author. He remarks that

"There is no disease more familiarly spoken of than aneurism of the heart; yet the affection which is with propriety so denominated, is exceedingly rare."

"III. *Of Organic Changes affecting the Arterial and Auricular Openings of the Ventricles.*"

"The arterial and auricular openings of the ventricles are liable to contractions; which are invariably combined with some cartilaginous or osseous depositions. Such alteration in the structure of the heart, disturbs the circulation in a very remarkable manner, and produces great derangement in the functions of almost every organ in the body."

"This is a disease, [narrowing of the left auriculo-ventricular aperture] which, according to my observation, shows itself at all periods of life, occurring in the young as well as the old; and unlike other diseases of the heart and vascular system, it manifests itself as frequently in the female as in the male. The signs of this complaint, in its first stages, are so vague and equivocal, that they are usually set down as nervous complaints: unfortunately the prognosis is generally unguarded, and a line of treatment calculated to aggravate rather than relieve the organic disease, is prescribed."

The author proceeds to give the history of two cases,

"in which the patients were suddenly carried off early in this disease, the one by apoplexy, the other by epilepsy; which were evidently the consequence of the difficult transmission of blood through the left side of the heart, by which the functions of the brain were so disturbed that these fatal effects were produced."

When the disease is fully established, the signs of the contraction of the left auriculo-ventricular opening are by no means doubtful. Of these we may indicate paroxysms of dyspnœa, hæmoptysis, uneasiness in lying in any but one position, irregular and widely extended palpitations of the heart, anasarca and ascites as the disease advances, strong pulsation in the jugular veins, and a general thrill through the branches of the arterial system, as in aneurisms; and when the ear is attentively applied to the thorax a hissing, purring noise is heard, caused by the transmission of blood through a narrow orifice.

"The more decided symptoms of this affection are to be found in the peculiar irregularity and want of correspondence in the pulse, as felt at the

wrist, and examined simultaneously at the heart: the latter often beats so violently against the sides of the thorax, as to shake the patient in his bed; while, at the same time, the arterial pulse is small, weak, and irregular: indeed, such is the state of the pulse in the arteries, that the physician, attending to this only, and overlooking the state of the heart, might readily suppose his patient in the last extremity, and dread to have recourse to those remedies, from which alone any relief is to be expected."

The pulse at the wrist

"appears to the person examining it as if there were two pulses; one slow and deliberate for two or three beats, which is succeeded by three or four rapid and indistinct pulsations; the heart upon the whole generally pulsates ten or fifteen times in a minute more than the artery, and its stroke is often more distinct in one arm than the other."

We are presented in this paper with a case of complete ossification of the Coronary Arteries of the Heart and of the Aortic Valves; the details of which we regret not having it in our power to transcribe. We could willingly and profitably keep company for a much longer time with Mr. ADAMS than we have done; but to give room to our friends requires our retiring from the field.

In proffering our best wishes to Dr. MARSH, whose paper "Upon the Origin and Latent Period of Fever," follows next in order, we can assure him of our intention to notice his production at the very first opportunity, perhaps even in the present number of the Journal.

The space already occupied in our analysis of Dr. CUSACK's paper, on Amputation of Portions of the Lower Jaw, precludes our reviewing, as its merits require, the report entitled

"*Cases of Excision of a Portion of the Lower Jaw, for the Cure of Osteo-Sarcoma affecting that Bone; with some Observations on the Pathology of Osteo-Sarcomatous Tumours.* By PHILIP CRAMPTON, F. R. S., Surgeon General to the Forces in Ireland, and Surgeon in Ordinary to the King."

The concluding remarks are as follows:

"But whatever may be thought of the *explanation*, to which indeed I am not disposed to attach any great importance, the *fact* may, I believe, be considered as well established, that, of the tumours which proceed from the *cancellated* structure of the bones, some are of a *malignant nature*, closely allied to cancer, or to fungoid disease, and, like those diseases, so prone to contaminate the constitution, as well as the parts with which they are in contact, that the removal of the diseased part rarely serves as a protection

to the system from a return of the disease; that others, on the contrary, are without any character of malignancy, and so purely local in their nature, that where the removal of the whole of the disease, however extensive, can be effected, the operation may be undertaken with the best prospect of affording permanent relief."

Our readers are referred to the 4th vol. p. 181-2, of this Journal, for a sketch of the paper, in the Hospital Reports, entitled,

"*A Case of Cynanche Laryngea, in which the operation of Tracheotomy was performed in March*, 1825, *and a Canula worn, up to the date of this Report.* By FRANCIS WHITE, Member of the Royal College of Surgeons in Ireland, and one of the Surgeons of St. Mary's Hospital and the Dublin Eye Infirmary."

"It is now, says Mr. WHITE, two years since the operation was performed; and the patient, whom I saw this day, (March 17, 1827,) has, during that time, worn the tube without any inconvenience, or being in the least prevented from working at his trade."

"*A Brief Notice of the Effects of the Vapour Bath in Tetanus.* By H. MARSH, M. D. M. R. I. A. Assistant Physician to Steevens's Hospital, &c. &c." Of three cases of tetanus, in which the vapour bath was employed, two recovered. In one of these, calomel and opium in succession had failed to produce any effect; and, in the other, ptyalism, induced by the two remedies conjoined, failed to mitigate the disease. These were the two recovered cases. In the first, croton oil internally, and belladonna and oil of amber along the spine, were used at the same time with the vapour bath. Dr. MARSH concludes thus:

"The mode of treatment, then, which appears to me to deserve further trial, consists in placing the patient, for many successive hours, in a vapour bath of a low temperature; and, at the same time, in powerfully upholding and supporting his strength."

The "*Account of a Remarkable Production resembling a Tail, which was attached to the extremity of the Vertebral Column of a Man;* by ARTHUR JACOB, M. D. &c. &c.," when taken in connexion with some other parallel cases, seems to give some plausibility to the opinion of my Lord Monboddo, that the human species had been originally endowed with the appendage of a tail, which it had lost by civilization. Instances of tail-bearing men similar to that described by Dr. JACOB, are recorded by writers worthy of credit.

Here we conclude our analysis of the Fourth Volume of The

Dublin Hospital Reports; the labour of which has been to us not only comparatively light, but productive of pleasure, on account of the strong good sense and powers of discriminative observation which prevail throughout the work. * * * *

ARTICLE XIV.—*Traité de la Maladie Scrophuleuse. Ouvrage couronné par l'Académie Impériale des Curieux de la Nature.* Par C. G. HUFELAND, Médecin du Roi de Prusse, et Conseiller d'Etat. Traduit de l'Allemand, sur la III me edition, 1819; et accompagné de notes, par J. B. BOUSQUET, Membre de la Societé de Médecine de Paris, &c. Suivi d'un *Mémoire sur les Scrophules, accompagné de quelques reflexions sur le Traitement du Cancer;* par M. LE BARON LARREY, &c. A Paris, 1821, 8vo. pp. 398.

AMONG those affections that have been called Opprobria Medicorum, the disease treated of by professor HUFELAND, in the above named work, is certainly not the least deserving of that melancholy appellation. The king's evil frequently baffles the skill of our most learned and accomplished practitioners. Nay, the very name, king's evil, gives sufficient assurance of its rebellious nature. The miracle of the royal touch would never be resorted to for the cure of a pleurisy, or a bilious fever. Miracles are only expected where the resources of art and reason fail.

Elaborate and painful treatises on the nature and cure of scrofula, are very common; and still the treatment, in spite of all that has been said and written on it, continues to be very empirical, vague, and unsatisfactory. Most of the bad cases, or even the slighter strumous affections of the constitution, are sooner or later withdrawn from the superintendence of the regular practitioner, and consigned to the hap hazard ministrations of the quack. Scrofula, syphilis, and cancer, are real El Dorados, where those gentry find gulls and gold, without number and without end.

Professor HUFELAND has long been the editor of a journal of acknowledged excellence; and it is through this journal princi-

pally, that his name has been made widely known in the republic of letters. He is a professor at the Medico-Chirurgical College of Berlin, and Director of the Charity in that city. He was born in 1762, and published this work in 1795. It is the principal work that he has published. The motives and origin of the publication, were as follows:

The Imperial Society of Naturalists offered a prize for the best essay, whose object should be

1. To illustrate, by new observations, the nature of the scrofulous acrimony.

2. To point out the most certain diagnostic signs by which the scrofulous virus may be clearly distinguished; whether latent, or developed in various degrees of malignancy, whether with, or without tumours.

3. To show, by accurate observations, to what kinds of scrofula, and to what complications of it with other diseases, the anti-scrofulous remedies hitherto known, are best adapted; and particularly, to show what degree of efficacy is possessed by the muriate of baryta in scrofula and in scrofulous diseases.

In accordance with the provisions of this *programme*, our author divides his work into three sections: of which section I, comprising 83 pages, treats of the nature or proximate cause of the scrofulous disease; section II, in 40 pages, gives a description of the disease; and in section III, we have an account of the treatment, in 212 pages.

In the introduction, Dr. Hufeland sets up a distinction, between scrofulas, (*scrofules, scrofulæ,*) and the scrofulous disease (*maladie scrofuleuse, scrofulosis.*)

Scrofulas are swellings of the glands, indicating only a local affection of the lymphatic system; while the *scrofulous disease* consists in a general affection, diathesis, or peculiar disposition, of the lymphatic system, of which scrofulas are often only a consequence or symptom. Scrofulas may exist without the presence of the scrofulous disease, and vice versa. The presence or absence of the former, does not either establish or disprove the presence of the latter. A distinction is also made between true and false scrofulas. Observation has proved, that most diseases affecting the lymphatic system, are accompanied with similar engorgements; and the author cites measles, variola, syphilis, &c.; in which these tumours occur without any scrofulous taint, and

are different, therefore, from such as are derived from the scrofulous disease. A deuteropathic, or secondary affection he admits may arise; and this will be a degeneration of a *sympathetic* affection into one possessing the essential characters of this frightful malady.

After these preliminary observations, he proceeds to section first, containing five chapters; of which chapter I, consists of general considerations on the lymphatic system; divided, by Dr. H., into

1, Absorbent vessels properly so called. These vessels are in great multitudes, very minute, transparent, uneven, provided with valves, arising by innumerable radicles from all the surfaces, external, and internal, distributed through all the organs, like the arterial vessels, of which *they are the terminations*, and proceeding to open, for the most part, into the ductus thoracicus. Dr. H. says, "for the *most part*, as many of them communicate directly with the sanguiferous vessels." We may venture here to declare our surprise at the assertion of the author, that the lymphatic absorbents are the terminations of the arterial vessels; an assertion which can only have been made through mistake, since they originate on all the surfaces, and terminate in the thoracic duct, or in the blood-vessels, as he distinctly remarks in the same sentence.

2. The thoracic duct.

3. The lymphatic, or conglobate glands.

Besides its general material, or physical properties, the lymphatic system is endowed with vital active powers different from those of mere matter; and hence the propriety of referring not only to its physical, but also to its vital forces, such as erethism, spasm, convulsion, paralysis, &c., to which it, like other systems, must be obnoxious.

Absorption takes place from the cavity of the alimentary canal, from the cutaneous and bronchial surfaces, from the interior of the cavities, from the cellular interstices, and from wherever there exists an absorbing apparatus, in muscles, glands, &c.

Dr. Hufeland regards the office of those absorbents which arise in the glands, as the resorption of the lymph; in consequence whereof, it must be again mingled with the blood of the general circulation, previous to any final act of nutrition. He expresses the opinion, that absorbent vessels exert a great vitalizing in-

fluence on the products of chylous absorption; since it is in those vessels that chyle assumes animal properties. If this be so, it is a reasonable inference that a longer contact with appropriate vital surfaces, and a longer subjection to their animalizing influences is provided for in the manner indicated by him.

While he admits the absorbent office of this system, in the collection and transportation of effete matters, to be entirely eliminated from the body, he asserts that one great object of it is to take away from the secretory organs the superfluous products of their functions: thus, they carry off from the liver its superfluous bile, and deposit it on the skin, as in jaundice; and he thinks there is probably such a direct communication between the absorbing vessels and our organs, that fluids may travel from one to another without passing in the route of the sanguiferous vessels. Hence they may transfer poisons from one place, and deposit them in another; as happens with the syphilitic and other infections.

We cannot but dissent from this view of the absorbing apparatus. The author assigns none except pathological reasons for his belief in this independent circulation. The valvular structures observable in these tubes could never explain such powers as he attributes to them. A lymphatic heart is as necessary for such a function, as the heart is for the propulsion of the red blood in its proper tubes. We cannot adopt such a loose physiology.

The influence of the lymphatic system, before alluded to, in the perfecting of sanguification, of which the first step is undeniably taken in them, is a most important consideration. It is manifest, says the author,

"— that the substances which travel in these vessels, and which are known by the too general denomination of lymph, must consist of chyle, of subtle substances extracted from the atmosphere, and of the detritus or effete molecules of our organs. Under these circumstances, the properties of this fluid may at one time be different from those it has at another.

"All these matters enclosed in the lymphatic vessels, ought to be taken into consideration, to enable us to appreciate the diseases they are subject to, and the causes that produce them. Unhappily, the majority of pathologists have taken into account only the parietes of these vessels; while the fluids they hold are wholly neglected, though they often determine the state of the vessels themselves. During the reign of humoralism, the importance of these fluids was exaggerated, and the solids were scarcely men-

tioned. Now, under the reign of the doctrine of sensibility, the contrary takes place. But truth rejects equally both these kinds of excess."

In chapter II, the author proceeds to treat of the remote causes of the disease; and divides them into three classes. It may be produced by a change occurring either in the lymphatic system, or in the fluids it contains; and the remote causes are, all such as diminish the tone of the solids, particularly those of these tissues; such as exalt its irritability, or benumb its sensibility; and such as occasion a bad chyle to be furnished; these are bad diet, air, &c. &c., derangement of the digestive organs, skin, and lungs. He speaks of the predisposing or principal causes, under several heads: as *Hereditary taint* or aptitude; which is irrecusably established by numerous facts and abundant experience, notwithstanding the arguments that have been brought to bear against the possibility of such a condition; a condition so well known and acknowledged in England, that one of the most important points in the choice of a wife, is to ascertain that she is free from the scrofulous taint.

Sex and age.—Females and children are more liable than others to its attacks.

Weakness of parents, produced by the abuse of the venereal appetite. The child of a very aged father, brings into the world a strong tendency to scrofula.

Syphilis in parents—The influence of aliments of a bad quality: and under this head is especially noticed the practice of artificial suckling. So many children are destroyed by the cruel practice of raising them, as it is in general falsely called, by the bottle or spoon, that we take great pleasure in citing his remarks on this particular topic.

"Nothing" says he, "is more prejudicial to the health, than raising children without the breast. I have almost always observed, that children brought up in this way, are more or less disposed to the scrofulous disease. Among all the fluids of the human body, none is more living than the milk. This is proved by the sudden influence exercised by moral affections on the mixture and intimate combination of its constituent principles. In this respect, milk may be compared to the seminal fluid. In the act of generation, this fluid must pass warm from one living body to another, in order to transmit the vital principle with which it is endowed; in like manner, the milk, warm and full of vitality, is, by the presence of its vital prin-

ciple, more perfectly adapted to the infant constitution, and is both more nutritious, and more digestible."

He cites also the fresh, healthy, and vigorous appearance of a child nourished at its mother's breast; and the pale, flaccid, and languishing condition of the nursling of the spoon and bottle; and adverts to the comfortable digestion of milk, either sucked directly from the living animal, or drank warm with life, by the expiring victim of consumption, while on the other hand many unpleasant symptoms arise from its use, if the same aliment be taken cold.

Lactation he regards as a provision, by which nature still keeps up, after the division of the umbilical cord, and the consequent cessation of the placental circulation, a direct intercourse between the mother and child. We have no remarks to offer on this singular and poetical hypothesis, except this; that an analogous sentiment has prevailed in all ages concerning the transmission, from one individual to another, of a portion of the vital principle. Hence, the beautiful and rosy Abishag was put to bed with David the King, in order that he might get heat; hence, the dying Barbarossa's legs were attempted to be warmed by a fomentation of healthy young infants—and lastly, hence the common prejudice against permitting a child to sleep with an aged and decrepid nurse.

The author deprecates most fervently, but not so fervently as Cobbett, a diet of *Irish potatoes;* and remarks that scrofula is very common in countries where children are fed on that root. *Polyphagy*, or cramming of children, as is commonly done, may give rise to scrofula, by impeding digestion, and producing an unwholesome chyle. He next details the effects of *bad air;* viz. such as is cold, humid, and dark, as that of England; also, a *variable* atmosphere, and lastly one highly *carbonized* and charged with *animal vapours*, as in cities and manufactories. All these conditions favour the development of the scrofulous diathesis; by their influence on the functions of the skin, by want of cleanliness connected therewith, resulting in weakness, and finally, by the absorption of deleterious principles.

All those things that *diminish the strength* of the *digestive organs;* such as the premature and inconsiderate use of tea and coffee, the abuse of medicines, and certain diseases. He dwells at some length on the abuse of opium and other narcotics in child-

hood; in themselves evils, but particularly dwelt on in view of the difficulties they threw in the way of proper crises, in those affections where they are employed. We cannot here show at length how opium interferes with the formation of a crisis. Dr. H. asserts, that a crisis depends on the reaction of the system against the morbific cause. Opium, and the narcotics which diminish the vital powers, must necessarily, when abused, prevent the reaction from arising to its just and requisite height, and consequently the disease degenerates, by assuming a chronic and rebellious character. Want of exercise, filthiness, abuse of heat by warm clothing and feather beds, precocious exertions of the intellectual faculties; each in turn receives a portion of our author's attention. To the above, if we add a too early employment of the sexual capacities, depressing passions of the mind, and the abuse of cold, we shall have finished the enumeration of the remote causes of the scrofulous disease; the whole of which extends from page 15 to 41 of the volume.

At page 41 commences the enumeration, or a sort of *catalogue raisonné*, of the *occasional* or *exciting* causes; of which the first is development of the body or *growth*. This process is under the immediate direction of the lymphatic system; as our author very fully explained in the preceding part of the work. When the growth, as in some instances, is exceedingly rapid, the lymphatic apparatus becomes the seat of a considerable irritation, frequently evinced in young persons by the lymphatic tumours, or "growing kernels;" which disappear without treatment or bad consequences of any kind. This kind of effect occurs at the periods of dentition and puberty; and may exercise a considerable influence on the strumous diathesis, which, at those epochs, frequently unfolds the symptoms of scrofula, rachitism, and phthisis.

Seasons.—The spring is more favourable to the development of the scrofulous diseases than any other; in consequence of the sort of universal excitement that takes place at that season in the organic functions, which, operating in a strumous constitution, concurs very much to the realization of its peculiar tendencies.

Mechanical causes, and diseases of irritation are also cited. The imperfect crisis, so commonly observed in the exanthemata, such as small pox, scarlatina, &c. leave behind a considerable irritation of the most unfavourable nature to those subjects. Bad

treatment in the above cases—a careless or ignorant mode of curing them, may often be justly blamed as the cause of those incomplete cures and unfortunate metastases, which terminate in the terrible sufferings of the victims of scrofulous disease.

In the 3d chapter begins the consideration of the *proximate cause;* or, as it is more commonly expressed in our days, the pathological nature of the affection.

"It appears to me, that this cause consists in a profound atony of the lymphatic system, accompanied with a specific irritation of those tissues, and a peculiar alteration in the lymph itself."

He regards therefore, the primitive seat of scrofula as fixed in the solids; which alone can be the subject of hereditation, or of the impressions of irritating and debilitating causes. Irritation and debility form, according to HUFELAND, the double or two-fold character of the disease: neither, alone, would be sufficient, since, if it were otherwise, syphilis and scrofula would be one and the same thing. He infers the existence of the debility from many circumstances; especially the disposition it has to attack the weaker age and sex, as children and females; the essentially debilitating nature of its causes; and the fact that tonics only are capable of utterly eradicating the strumous habit: while irritation, on the other hand, is inferred, from the readiness with which scrofula is brought out by slight irritations of the lymphatic apparatus; and from the circumstance that antiphlogistics, which are capable of removing most of the symptoms of scrofula, are yet incapable of rooting out its germ from the constitution.

Our readers will excuse us for offering a remark on this mode of reasoning of the philosophic author; a remark not inconsistent with the highest feelings of respect in us, while we differ very widely from the doctrine he lays down. Scrofula, says he, is a disease of irritation, and its symptoms may be removed by antiphlogistics; but it is also a disease of debility, and its germ, that is the tendency to it, can only be removed by tonics. Irritation, in our view, constitutes a part of inflammation; it both leads to it in the first instance, and sustains it when formed; and, if our antiphlogistics remove inflammation, they only do so by attacking the irritative affection. Now, we conceive, that having removed the cause of the symptoms, or, as we should say, the pathological cause, we have no occasion, in a vast number of cases, to resort to

the use of tonics: we mean the use of tonic medicines, in themselves, not unfrequently, the causes of irritative phenomena, which their pressing exhibition can only aggravate, not remove. They are perhaps the most abused class of all the materia medica. Let us get rid of the irritation, and we see, as a general rule, no need for the exhibition of tonics; but we prefer to aid the recuperative tendencies of the constitution by the safer and far more natural regulation of them by means of diet, air, and exercise. The *non-naturals*, as they are called, in a large majority of instances, are the real and only trustworthy tonics. In the hands of Dr. HUFELAND, we should not, perhaps, dread the use of this class; but, for the generality of medical practitioners, they are less safe than the narcotics, or even the much abused class of cathartics. We are willing, nevertheless, to adopt our author's opinion, in regard to the existence of a minus state of what may be called strength or stamina, to which is superadded, irritation: which could not fail to result in the manifestation of phenomena, very different from those we would expect to find from irritation, supervening on either a just, or on a superlative amount of stamina.

[TO BE CONTINUED.]

MEDICAL LITERATURE.

RETROSPECTIVE REVIEW.

ARTICLE XV.—*The Medical Works of* EDWARD MILLER, M. D., late Professor of the Practice of Physic in the University of New York, and Resident Physician for the City of New York. Collected and accompanied with *a Biographical Sketch of the Author.* By SAMUEL MILLER, D. D., &c. New York, 1814, 8vo. p. 392.

THE professional writings of Dr. MILLER were pronounced by Professor RUSH, to constitute "a valuable addition to the medical science of our country." They, undoubtedly, contain much original matter; and, throughout, bear evidence of being the productions of a sound and capacious mind, habituated to a close and philosophical investigation of the causes and nature of disease. Their author, it is well known, was one of those distinguished members of the profession, who, to a serious conviction of the dignity and importance of our science, added an ardent desire, and all the necessary qualifications, to aid effectually in its advancement to truth and certainty; and we cannot but regret that disregard for native talent, which has permitted his writings, in the short space of sixteen years, to fall into almost total oblivion. Being seldom read, and scarcely ever referred to as authority, we should not be surprised if some of our readers have remained, until the present moment, entirely ignorant of their existence.

In place of the cold neglect the works of Dr. MILLER have experienced, had they received a degree of attention adequate to their merits, and had the important views which their author has endeavoured to establish, been more carefully examined, and cautiously tested by those facts which experience has accumulated; in all probability, the medical profession of this country would, long since, have secured to itself the honour of many of those

important improvements in the principles of our science, upon which the celebrity of Broussais, and of the French School of Physiological medicine, chiefly depends.

It will, perhaps, be matter of surprise to many, to learn, that early in the present century, the supposition of fever ever existing without "some primary local affection," was strongly contested by an American professor; and that, from the practical chair of an American University, as well as through the medium of a professional journal of extensive circulation, was taught the doctrine, that most, if not all, of what have been termed idiopathic fevers, consist, primarily, in an inflammation of the mucous membrane of the stomach and duodenum; and this, many years before even the name of Broussais had been heard on this side of the Atlantic. That such, however, is the fact, will be fully established by a reference to the work before us, and to the pages of the New-York Medical Repository.

It is from the influence of these circumstances, no doubt, that the medical public in this country were so generally prepared to acknowledge the stomach to be the organ principally implicated in many fevers; and that the "new doctrine," as it has been termed, was received by numbers among us, rather in the light of an acquaintance, than as a perfect stranger, with whom it required time to become familiarized. Hence, also, are we to explain the fact, of its having so rapidly obtained for itself, in our neighbourhood, a host of warm admirers and able defenders.

Dr. Edward Miller was born at Dover, in the state of Delaware, on the 9th of May, 1760. His education was commenced under the eye of his father; who, we are informed, was an excellent classical scholar; and was finished at a seminary, which then enjoyed high reputation, in the village of Newark in his native state.

"He had," observes his biographer, "from very early life, a peculiar taste for the study of the classics. And being so happy as to fall into the hands of able teachers in this branch of knowledge, teachers who had themselves received instruction from the best European sources, his acquirements in Grecian and Roman literature were much more extensive, and more accurate, than were, at that period, usually made in this country."

On the completion of his academic course, he entered upon the study of medicine, as a pupil of Dr. Charles Ridgely, an eminent

practitioner at Dover. Young MILLER was soon, however, convinced that it was not from books alone, but chiefly at the bed-side of the sick, that the knowledge was to be obtained, upon which his reputation and usefulness as a physician would ultimately depend. It was this conviction that induced him, when he had been but little more than two years in the office of his preceptor, to abandon it for the situation of surgeon's-mate, in the United States Military Hospitals; that here, by an immediate superintendence of the sick, he might more completely prepare himself for the important duties of his profession. As a surgeon's-mate, he served rather more than one year, which was spent chiefly in the hospital at Baskingridge, New Jersey. Towards the conclusion of the year 1781, he was induced, by the solicitation of his friends, to accept the appointment of surgeon on board an armed vessel, bound to France. In this voyage, and in that country, he spent near twelve months.

Dr. MILLER carefully improved the opportunity which this visit to Europe afforded him; not only to acquire the French language, which he ever afterwards read and spoke with ease; but, also, to make himself acquainted with, and to collect, some of the best books, and especially some of the best medical books, in that language. He returned to his native country in 1782; and during the winters of each of the two following years, attended the lectures of SHIPPEN, MORGAN, KUHN, and the other medical professors of the University of Pennsylvania.

In 1783, the treaty of peace between this country and Great Britain terminated the connexion of Dr. MILLER with the army and navy; and in the ensuing year, he entered upon the practice of his profession, at the village of Frederica, in the state of Delaware. In a few weeks, however, he removed from thence to Somerset county, on the eastern shore of Maryland; and in 1786, upon the death of his preceptor, he left the latter place, and settled in Dover, where he soon obtained a highly respectable practice.

During Dr. MILLER's residence at the latter place, he was in the habit, we are informed, of visiting Philadelphia, at least once every year. To this annual visit he was induced, not only that he might enjoy the society of his relatives, who resided in this city, but also "that he might have an opportunity of personal and

unreserved intercourse with some of the most illustrious physicians then resident in the United States; that he might collect all the new medical and other valuable publications from abroad, which flowed into this literary emporium; and that the various articles of medical news, which his correspondents had failed of transmitting to him, might not wholly escape him."

In 1789, he received from the University of Pennsylvania the degree of Doctor in Medicine.

In 1793, the controversy respecting the origin of that pestilence, the visitation of which had rendered Philadelphia literally "the city of the dead," called forth from Dr. MILLER a letter, addressed to Professor RUSH, and published in most of the American newspapers. In this letter, upon a calm and dispassionate comparison of the testimony in regard to this all important question, he was led to the conclusion, that the disease was of domestic origin; a conclusion, in the correctness of which he was confirmed, by each subsequent occurrence of the yellow fever.

Two years from this period, the metropolis of New York was visited by this same malignant epidemic, and among its victims were numbered many of the most distinguished physicians of that city. The vacancy in the profession thus occasioned, presenting a fair opportunity for the successful exertion of the talents of Dr. MILLER, he was affectionately solicited by his brother to remove to that place; which he accordingly did in the fall of 1796. His abilities were here immediately recognised; and obtained for him a highly lucrative practice, in a space of time much shorter than he could possibly have anticipated.

Soon after Dr. MILLER's removal to New York, the project of a periodical journal, consecrated to medicine, and those several departments of knowledge connected with it, was conceived by Dr. ELIHU H. SMITH. This plan being communicated to Dr. MILLER, and subsequently to Dr. SAMUEL L. MITCHELL, they both agreed to co-operate with the former in carrying it into execution. Accordingly a circular address was laid before the medical public of the United States; and was received with so much approbation and encouragement, that, in August, 1797, the first number of the "Medical Repository" made its appearance.

In regard to this journal, to the pages of which Dr. MILLER was

a constant and able contributor, we find the following interesting remarks by his biographer.

"From this work, as a parent stock, have sprung a number of works of a similar kind, in Europe and America. It is not recollected, by the writer of these sheets, that any periodical publication, devoted to medicine and medical philosophy, that could be said to be of the same nature with the Medical Repository, had ever before appeared. The *Medical Commentaries* of Professor DUNCAN, of Edinburgh, were, in many respects, very different. The *Medical and Physical Journal of London*, was commenced soon after the appearance of the Medical Repository; with the avowal of its editor, that he took the hint from New York. Other editors, in London, Paris, Edinburgh, and Bremen, in a short time, started similar journals; while rival and learned publishers in New York, Philadelphia, Baltimore, and Boston, have been excited to exertions of the most respectable kind, from which there is no doubt that highly valuable results have accrued."

In 1803, Dr. MILLER received the appointment of resident physician for the port of New York. The duties of this officer were, "to watch and give notice of the progress of malignant epidemics, and promptly to adopt such measures as exigencies may require." In the several pestilential seasons which succeeded this appointment, Dr. MILLER, we are assured, "fulfilled the duties of his office with skill, intrepidity, and universal acceptance. His diligence, his firmness, his discernment, his prudence, his mildness, and urbanity of address, and his unwearied perseverance, were all qualifications which fitted him pre-eminently for a place, in which public safety, as well as public feelings and prejudices, were to be so constantly consulted and managed." This important station he continued to hold, until towards the close of the year 1810; when from some political motives he was superseded. In the course of the following year, he was, however, re-appointed; and continued to hold the office until his death.

In 1807, he was called to fill a more elevated station, the duties of which were at once in the highest degree important and interesting. A charter having been obtained for associating the physicians of New York into a college, "for the promotion of professional education upon a regular and enlarged plan," the objects of this association were immediately carried into effect; professorships were instituted in the various branches of medical science, and, in the election of professors to fill the various

chairs, that of the practice of physic was confided to Dr. MILLER. He entered upon the duties of his appointment in the month of November following.

"He by no means regarded this professorship as a mere title of honour. Strict fidelity to every trust reposed in him, was one of the first articles in his moral and professional creed. He therefore began immediately to prepare himself for that course of public instruction which his office demanded; and it proved such as his talents, his learning, and his zeal had taught his friends to expect. 'His lectures,' says one who is a competent judge, 'were highly commended by his hearers, as combining much instructive matter with an unusually agreeable manner.' And another, no less competent, pronounced them to have been 'probably among the best specimens of public medical instruction ever exhibited in our country.'"

In the year 1809, Dr. MILLER was also appointed one of the physicians of the New York hospital, and soon afterwards clinical lecturer to that institution.

From various parts of the United States, he received numerous and flattering testimonies of respect. He was elected, in 1805, a member of the "American Philosophical Society," at Philadelphia. His name was also enrolled as an honorary or corresponding member of the principal medical societies throughout the union. While the numerous letters which were addressed to him from all quarters, communicating medical intelligence, or soliciting professional advice, furnished decisive evidence of the large share of public confidence which he enjoyed, and of his growing reputation.

"Thus occupied in public and private business, accumulated to such an amount as scarcely to leave him an hour of repose, either by day or by night, he was arrested by that iron grasp of disease, from which he had so often been the means of disengaging others; and, to the grief of all who knew him, sunk under its power." On the 22nd of February, 1812, he was obliged to keep his room, in consequence of a severe attack of pulmonary disease: after two weeks of suffering, his complaint appeared gradually to abate, and the most flattering hopes of his recovery began to be cherished; but at the moment when every idea of danger had been dismissed, he suddenly relapsed; and died, on the 17th of March, 1812, in the fifty-second year of his age.

With respect to the character of Dr. MILLER, we can only spare sufficient space to add, in addition to the hints contained in the foregoing sketch, that in him were joined, to a strong and highly

cultivated mind, perfect soundness and purity of heart; he being equally noted for his moral worth, as for his literary and scientific acquirements. Two circumstances are related of him deserving of universal imitation: we allude to the purity of his conversation, its entire freedom from lasciviousness, and every expression even bordering upon indelicate; and his strict sobriety. "He seldom drank any thing stronger than water; and he discouraged, as far as possible, the use of ardent spirits, both by precept and example."

The volume of his works, the title of which is placed at the head of this article, consists of a variety of essays on different topics connected with the science of medicine. The majority of these essays appeared originally in the "Medical Repository;" of which journal, as we have seen, Dr. MILLER was one of the editors. Subsequently to his death, they were collected into a volume and published by his brother; at the earnest desire of Dr. RUSH, between whom and their author, there had existed "the most intimate and endearing friendship."*

The first article, with the exception of the biographical sketch, is an inaugural dissertation, "*De Physconia Splenica*," which was submitted to the medical faculty of the University of Pennsylvania, in 1789; Dr. MILLER being then, as we have already stated, a candidate for the degree of M. D. The statutes of our University, at that period, required that all inaugural dissertations should be written in Latin; and though we cannot extend to that of our author, the praise of a purely classical style, yet when we are informed that he wrote it "originally in Latin, and wholly without assistance," it certainly affords an honourable specimen of his familiarity with that language. As a medical production, this dissertation calls for no particular notice. The disease of which it treats, is defined as follows:

"Febrium intermittentium plerumque sequela; tumor in regione hypo-

* The high esteem in which our author was held by Dr. Rush, will be perceived from the following extract from a letter written by the former, to the brother of Dr. Miller, a few days after his decease.

"Judge of my affection for him, and the value I placed upon his integrity and friendship, when I add, that, four or five years ago, in a private interview, in my own house, I committed my lectures and manuscripts to him; to be revised by him, and published or destroyed, as he saw proper, after my death."

chondrii sinistra exortus; paulatim crescens; durus; sæpe indolens; nec sonorus, nec fluctuans; quandoque longe et late diffusus; et diutissime permanens."

As we perceive by this definition, the author considers the enlargement and induration of the spleen to be almost invariably the consequence of intermittent fevers. Its proximate cause he supposes to consist in a sanguineous congestion, and languid circulation of the spleen. His mode of treatment is that with which every physician is familiar.

The next article is an essay entitled "*Cursory Observations on that form of Pestilence called Yellow Fever.*" The design of which was,

—"to combine a number of facts relating to the operation of poisons on the animal system; to compare them with the action of febrile miasmata; and to draw such conclusions concerning the nature, prevention, and treatment of pestilential diseases, as may appear legitimately to result from the comparison."

In this essay, we have the first announcement of Dr. MILLER's opinions in regard to the nature of fever—that it depends upon some primary local affection, in which the other organs of the system participate, to a greater or less extent, by a sympathetic association.

"After all our researches into the nature of fever," he remarks, "it seems primarily to consist in the stimulation, by poison, miasmata, or otherwise, of a particular part of the system, and in the propagation of morbid affection afterwards, from the viscus, or part originally invaded, to the heart and arteries, and other parts of the body. If this be just, according to the theory of a celebrated writer, (DARWIN,) fever is merely topical at first, and subsequently a disease of association. The morbid cause, how varied soever, whether contagion or miasmata; whether alternation of temperature, or other noxious power operating in a similar way, appears always to act upon the same principle: it stimulates, directly or indirectly, a particular portion of the system, in a less or greater degree; sometimes to the extent of common inflammation, sometimes to inflammation *sui generis*, then to more violent inflammation, verging rapidly to gangrene, and lastly to the extent of paralysis. The part thus variously affected, through the medium of sympathetic association, propagates disease to other parts of the system, and especially to the heart and arteries. This association may be more or less comprehensive, and thereby render the fever more simple or compound. And upon certain peculiarities of structure, or the greater or less importance of the part primarily attacked, and upon the more or less com-

pound nature of the disease, resulting from the extent of association, will probably depend the character of the fever, as to mildness or malignancy."

"Examples of this," continues our author, "may be found in cases of pneumonia and yellow fever. In the former, a local inflammation of the lungs, the effect of exposure to alternation of temperature, excites febrile action throughout the sanguiferous system: in the latter, miasmata, received, as there is commonly reason to conclude, into the stomach, first attack that important organ, and soon afterwards, draw into morbid sympathy, various parts, as the head, limbs, back, &c. then the heart and arteries, and successively, many other parts of the body. Hence it appears, that fever is originally local; and though, in its progress, it may be extended over the whole body, we are still to regard it chiefly as symptomatic of the stimulus applied to a particular part. If a sword penetrate the abdomen, and transfix the stomach, the range of sympathy possessed by this viscus will draw on a train of severe consequences, such as pain, inflammation, fever convulsions, gangrene, &c. In this case, the convulsions and the fever, are equally symptomatic of the wound; and, by attending principally to these, and overlooking the organic injury, we should act as is common in pestilential diseases; where the force and rapidity of the action of the blood-vessels are deemed of more importance than the local poison which inflames, corrodes, or paralyses a vital organ."

By a variety of facts and arguments, Dr. MILLER next endeavours to show, that the general and local symptoms are the same in cases of poisoning from the introduction of acrid substances into the stomach, as in epidemic and pestilential fevers. After enumerating the phenomena produced by the former, he remarks:

"The most transient consideration of the symptoms just recited, cannot fail to impress the reader with the striking analogy, between the operation of poisons, and the miasmata and contagions which produce epidemic and pestilential diseases. Scarcely a single symptom belonging to malignant distempers can be mentioned, which does not also appear as a consequence of the reception of poison; and particularly, the most deadly symptoms observed in the one form of disease are also found to be common to the other."

The source of the analogy which our author has thus attempted to establish, between the action of mineral and vegetable poisons introduced in the stomach, and of the miasmata of pestilence, has its origin in the similarity in the morbid condition of the latter organ induced by each.

"All these noxious powers, however various in constitution and origin, concur in possessing a stimulant operation, so violent as to cause inflammation, paralysis, or decomposition in this vital part."

This similarity of the operation of poisons and miasmata, is, in his opinion, strongly confirmed by the "evidence of dissections."

"By these it appears, that, in yellow fever, the stomach and duodenum generally sustain the first and most violent impression of the miasmata; that they suffer, by means of this stimulus, inflammation, paralysis, or corrosion; and that they exhibit a destruction of the villous coat, and an accumulation of black matter, exactly resembling those which arise from the mineral poisons."

The term "paralysis of the stomach," which so repeatedly occurs in the preceding extracts, is one of those instances of the use of words without any precise or definite meaning, with which medical writers, of otherwise distinguished abilities, are too frequently to be accused: a practice which cannot be too severely censured; having tended, as much perhaps as any other cause, to retard the improvement of our science. So far as we can discover the meaning of Dr. MILLER, he applies the term "paralysis of the stomach" to those instances of rapid death from violent irritation of that organ, in which, upon dissection, it presents no morbid alteration whatever; as in the case he refers to, recorded by MORGAGNI, (Seats and Causes of Disease, vol. iii. p. 374,) where, a dose of arsenic proving fatal, no inflammation, erosion, or other morbid appearance was discoverable in the stomach, although the arsenic was found in contact with its mucous membrane, and distinguished by the usual tests.

From the chain of reasoning referred to above, Dr. M. was induced to believe that the miasmata, upon which the yellow and other malignant fevers depend for their production, becoming

"— mixed with the saliva over which the air in respiration wafts them, descends with it into the stomach."

"The burning heat in the stomach, as well as the nausea and vomiting, at the attack of yellow fever; the strong traces of inflammation in that organ, when laid open to view; the injuries of the villous membrane; the black matter overspreading its surface; and the extension of these morbid appearances to some distance in the duodenum; all seem to denote the presence and immediate application of *virus* to the coats of the stomach."

Of the untenable nature of the ground he occupied, in maintaining that the miasmata productive of fever, were invariably received into the stomach, and acted immediately upon its mucous coat, our author was, however, very soon convinced; and with that candour so characteristic of an enlightened mind, he lost no

time in publicly acknowledging and correcting his error; accordingly, in a paper published a short time subsequent to the one we have just noticed, he remarks;

"The mistake in my paper concerning yellow fever, consisted in adopting the opinion, that the gastric affection in that disease ought to be attributed to the primary and immediate action of the febrile poison, swallowed with the saliva, upon the inner surface of the stomach and duodenum. This was undoubtedly a hasty and incorrect view of the subject."

The gastric pathology of fever was not, however, abandoned; the stomach he still maintained to be the part in which the morbid action commenced, and from whence it was communicated to other organs; and this in consequence, as he expresses it, of its possessing, in an extraordinary degree, the property of fixing disease, in itself, with the effect of diffusing it afterwards to other parts of the system.

"In a state of health, the functions of the stomach, as the principal organ of assimilation, will give it a high rank among the parts of the system which support life. But it is in diseases that its principal powers and relations are unfolded to view. In fevers it is, probably, in most instances, the part first affected, as it commonly affords the first notices of the approaching mischief. From its susceptibility of morbid action by noxious powers applied immediately to its surface, or to distant parts of the body with which it maintains sympathetic connexion, it becomes not only the introducer of such action to the vital organs, but a centre of association, and an index of the most interesting circumstances concerning the accession, progress, remission, crisis and cure of diseases."

"No part of the system possesses so wide a range of sympathy as the stomach. The phenomena of diseases demonstrate every day its connexion with the heart and arteries, the brain, the lungs, the skin, the kidneys, the uterus, &c. The due understanding and recollection of these sympathies is not only of great importance in detecting the seats, causes, and nature of diseases, but quite as much so in directing the means of cure."

"In consequence of this centrality of association and sympathy, the stomach is subjected to peculiar degrees of injury and derangement by diseases. It may be safely affirmed, that no part of the body is so liable to disorganization in malignant fevers as the alimentary canal, and especially the stomach and duodenum. Morbid dissections so generally afford proof of this, that it would be improper to detain the reader by a recital of particulars."

"Such considerations as these, in addition to a great many others, seem fully to support the doctrine, that fever is principally a disease of association; and to prove that the sympathetic theory of it is better adapted than

any hitherto known, to explain the various phenomena, and to point out the most appropriate and efficacious modes of treatment. It affords strong confirmation of this doctrine, that the stomach, the most associable part of the system, is the first and principal sufferer from the noxious causes which produce fevers; and that afterwards, in succession, the organs possessing the closest sympathetic relation to the stomach, such as the heart and arteries, the brain, the lungs, the skin, &c., are precisely, in the order of their sympathy, the most exposed to be involved in this morbid connexion."

"The doctrine of fever, therefore," remarks our author, "which appears to be most consistent with the phenomena, so far as they have hitherto been observed, is this:—Certain noxious powers, called miasmata, contagions, and poisons, find admittance into the system through the mouth and nose, or the pores of the skin, or they are inserted by the bite of a rabid or venomous animal. Whether miasmata and contagions, entering by the mouth, exert their action chiefly on the lungs or stomach, cannot yet be certainly decided. It is not improbable that differences in the ensuing disease may often arise from the various degrees of susceptibility in the several organs which give reception to the noxious matter. But whatever be the mode or place of entrance, the noxious matter, after a longer or shorter time, excites the system to a state of action which is morbid both in kind and degree. The stomach, the most moveable and associable of all the organs of the animal body, is the first to experience this excitement in itself; the most adapted, from its extraordinary powers of sympathy, to extend it to other viscera; and the most liable to sustain the burden of the disease, and to undergo the most fatal disorganization. To the heart and arteries, to the brain and lungs, to the skin, and occasionally to many other important parts of the system, is this morbid excitement communicated by means of the associative influence of the stomach. Hence all the variety of congestion, inflammation, effusion, engorgement, gangrene, and other modes of derangement, which death exhibits in the stomach, intestines, brain, lungs, and other viscera of such as die of malignant fevers."

Those phenomena to which in popular language the term fever is applied, are, by Dr. MILLER, referred to an "irritation of the sanguiferous system."

In regard to the manner in which fevers produce death, he has the following remarks.

"Without undertaking to inquire into all the modes in which a fatal termination of them may be apprehended, there are two which probably will not be controverted:—1st, organic derangement of some viscus essential to life—or, 2ndly, general exhaustion of vital power, or the principle of excitability. The former is commonly effected by the violent impetus of the blood's circulation, determined to particular viscera; and accomplishing the fatal event by the instrumentality of congestion, engorgement, effusion,

&c.; and the latter, by that excess of stimulation which is the sum of all the inordinate actions resulting from the disease."

We may be censured, perhaps, on account of the unusual length to which we have extended our quotations from the pages before us. This, however, could not well be avoided, as we were desirous to present a very full exposition of the opinions of our author in relation to the pathology of fever; and for very obvious reasons, were induced, in so doing, to employ, invariably, his own language.

The identity of the foregoing opinions with those maintained by Dr. Broussais, and his adherents, must be evident to every reader who is familiar with the latter. Even in the few particulars in which the views of Dr. Miller may appear to differ from those of the French professor, it will be found, upon a more close examination, that the difference is merely that of phraseology,—the same terms not having been made choice of by both to express similar ideas. It is true, that the latter has given a more full development to those principles which the former has but slightly indicated; and has founded upon them a system of practice, of a highly ingenious, though somewhat novel character.

We would not wish that any of the preceding remarks should be construed into an attempt on our part to detract from the merits of Dr. Broussais, or as calling in question his claims to originality, in regard to the doctrines he has promulgated. The discovery of the same facts, and even the establishing upon them of similar theoretical views, by different individuals, without the assistance, or even knowledge of each other's labours, is a circumstance by no means of unfrequent occurrence. But it is to him in particular, who, by his zeal and industry, has been enabled to follow up his discoveries, in such a manner as to produce by them a radical change in the principles of any science, that the chief honour is to be awarded.

We are happy to have it in our power to say, that Dr. Broussais has had an opportunity of becoming well acquainted with the writings of Miller, and that he is accustomed to refer to them in his lectures, in terms of the highest commendation: while, if we are not misinformed, he cheerfully concedes to the American professor, the full credit of having anticipated some of the most important points in the "new doctrine."

It will be proper here to remark, that the idea of fevers being merely symptomatic of a local disease, we are far from claiming as original with our author; on the contrary, we are persuaded that, with a very little industry, we would be enabled to name the works of numerous physicians, in which this doctrine was hinted at, or explicitly taught, many years before the appearance of any of Dr. MILLER's writings.

Dr. CURRIE, in his "General view of the principal doctrines, &c.," refers to HENRY SCRETA, who, early in the eighteenth century, "reviving the opinion of Diocles, derives all fevers from an inflammation of the viscera."* In 1789, FRANCIS RIOLLAY, M. D., of London, published his "Critical Introduction to the Study of Fevers,"† in which he thus states his idea of these diseases.

"Many reasons incline me to believe, that fever is no disease in itself, that in all cases, it is symptomatic of some affection, and that it never is primary or essential. Where the disturbance of functions points out the seat of the disorder, the fever is unanimously called symptomatic; but if *the part affected* is not obvious to the senses, it is reckoned essential; whereas, it is more natural to think, that as, in many cases, fever is a symptom of a particular affection, it also is a symptom when the affection appears general. Fever seems to be nature's common signal of distress; which, on most occasions, she displays for relief, though very variously. Sometimes, unnecessarily alarmed, she expresses her fears in too forcible accents; sometimes, though dangerously situated, her voice is with difficulty heard, as if unable to raise it, or insensible of her danger. In some cases she points out the seat and cause of her trouble; in others, so many organs are attacked at once, that she thinks it useless to mention any particularly."

When we consider the frequency with which the doctrine of the purely symptomatic nature of all fevers occurs in medical writings, we can only explain the reason why it has not before now attracted more general notice, by the fact, that pathological anatomy had been but little attended to, as a means of determining the seats and nature of diseases.

But to return to the volume under review. The following

* The work of Screta was published in 1716; and is entitled "De Febre castrensi maligna, seu mollium corporis humani partium inflammatione dicta."

Diocles, whose doctrine SCRETA is presumed to have revived, flourished about the year 380 before Christ.

† Being the substance of discourses read at the College of Physicians for the Gulstonian Lectures.

paragraph will show to what extent Dr. M. was inclined to carry the Gastric pathology, in accounting for the phenomena of febrile diseases. Having spoken of the manner in which the stomach may be either primarily or secondarily affected by "febrile poisons," and shown that the consequences of both are the same; he adds,

"Dr. DARWIN, whose theory of fever will remain an everlasting monument of his penetration and the comprehensiveness of his views, relies on that distinction to explain the difference between the mild and confluent small-pox. Thus he supposes, that, in the distinct small-pox, the stomach is affected secondarily, by sympathy with the infected tonsils, or inoculated arm; but that, in the confluent small-pox, the stomach is affected primarily, as well as the tonsils, by contagious matter mixed with the saliva and swallowed. With all possible deference for such authority, it seems to be difficult to admit this doctrine, without many exceptions. There can be no doubt that the inoculated small-pox sometimes proves to be confluent, where no suspicion can exist of contagious matter being admitted into the stomach, and primarily or immediately affecting that organ. Would not Dr. DARWIN have been nearer the truth, if he had contended, that the force of morbid action, which is sympathetically conveyed from the inoculated part to the stomach, and thence extended, by association, to other parts of the system, may, according to constitutional and other circumstances, be sufficiently diversified to produce all the varieties of the distinct and confluent disease."

By the "leading agency of the stomach in the establishment and extension of the morbid actions, called febrile," our author would explain the circumstance of terror, and other powerful emotions of the mind, frequently bringing on diseases suddenly, and imparting to them a degree of malignancy.

"No part of the body exhibits more intimate connexion with the mind than the stomach. No other part has its functions so immediately affected by mental emotions; as is often observed in the sudden loss of appetite and suspension of digestion by the arrival of joyful or afflicting intelligence. The consequences of this close connexion are often pernicious in the seasons of mortal epidemics. Every individual, at such times, must be presumed to be more or less under the influence of the reigning noxious powers. Terror is apt to start up and assail the mind from trifling, as well as substantial causes of apprehension. The stomach being, as has been seen, the chief recipient and propagator of morbid action, and this morbid action being most likely to intrude and fix itself, when that viscus, from any cause, is deprived of its accustomed tone; it clearly results that terror may operate, in seasons of malignant epidemics, as a powerful and destructive

exciting cause. Experience and observation confirm the opinion suggested by reasoning." A few pages afterwards he thus continues the subject. "It is probable that a mortal epidemic, by filling the minds of the weak with frightful impressions, especially when these impressions are heightened by an accidental contact of the sick, is rendered much more destructive to the community through the associative operation of fear, which thus, *under the mask of contagion*, exerts a fatal influence on the system, through the medium of the stomach."

"The noxiousness of terror," he adds, "seems to admit of illustration, from the effects of intemperance in debilitating the stomach, and thereby inviting the attack of febrile action. The observation is familiar to every person, that the invasion of malignant diseases is more frequent and violent after a fit of drunkenness. That the stomach is, in this case, the first and principal sufferer, will not be denied. But the condition of this organ is not rendered much more unfit for the performance of its functions by a debauch, than by the overwhelming operation of terror."

From the last quotations, it will be perceived that our author applies the vague term "debility," to that condition of a part which predisposes it to disease. This mode of expression, almost universal with the physicians of the period in which he wrote, and extremely common with those of the present day, is one, the employment of which appears to us to be but little calculated to enhance our knowledge of pathology. Thus, can any one positively say what is meant, in the quotations just referred to, by "debility of the stomach," as a predisposing cause of fever? The author certainly does not mean us to understand by it, a deficiency of vitality in that organ, inviting to it "the attack of febrile action;" as this would be in direct contradiction to all his previous reasoning; for it is undoubtedly from the eminently vital character of the stomach, that he supposes it to become "the chief recipient and propagator of morbid action." Neither can he mean, by "debility of the stomach," a decreased action of its capillaries; for no one can suppose that such a condition would render them more prone to take on that "violent morbid action," terminating in "fatal disorganization," which he has shown to be their condition in all malignant fevers. If, however, he simply mean, as his language would indeed lead us to suppose, by "debility of the stomach," a failure in its digestive power, this is only saying, in other words, that the organ is not in its ordinary healthy condition, leaving us still to enquire in what this deviation from health consists. The fact is, the expression, when used in the loose

manner it is by our author, and by too many of our contemporaries, has absolutely no precise meaning; though one unfortunately is often attached to it, that has led to a highly pernicious practice—the administration of tonics and stimulants.

From the work before us, we learn that Dr. MILLER was perfectly aware of a circumstance, not always kept in mind in medical reasoning, but which, nevertheless, is one of great importance in a pathological point of view; we allude to the fact, that inflammation of the mucous membrane of the stomach may exist, in the most violent degree, without giving rise to any of those symptoms, by which it is ordinarily indicated. In his "cursory observations," he remarks;

"It may be objected to the opinion of the operation of miasmata, in producing inflammation, paralysis, or corrosion in the primæ viæ, that symptoms characterizing these affections do not always appear in yellow fever, and that sometimes they do not appear at all, in cases where the greatest organic destruction of the stomach had taken place. But it may be replied, that nothing is more probable than fallacy on this subject. Inflammation, in the most fatal degree, may exist in the stomach without fever, pain, or vomiting; and paralysis may be produced in that organ, in a moment of time, without being perceived."

That irritation is never general, or in other words, that it is always confined to particular portions of the system, while, as a consequence, other portions are invariably affected with a corresponding degree of debility, is an important fact, much insisted upon by BROUSSAIS, and the cultivators of physiological medicine: a similar statement, though expressed in somewhat different terms, is made by our author.

"It is by excessively concentrating excitement in certain organs, and by robbing others of their due share, that these noxious powers induce disease. By pursuing an analogous course, and soliciting excitement back again from the diseased parts, in order to fix it in others less essential to life; the physician (differing chiefly from the morbid cause, in the parts to which he applies the stimulating agent) imitates the procedure of those noxious principles which are most inimical to life."

This doctrine, however, is not peculiar to either the American or French professor: it is one which was well understood in the school of RUSH; and hence the expressions, "to equalize excitement;" "destruction of the balance of excitement;" and similar language, so familiar to the American physician. The

proposition, when properly understood, is certainly one deserving of close attention; a full recognition of it being, indeed, essential to our success in the treatment of a great variety of diseases.

In regard to the remedies best adapted to the cure of fever, the work under review affords us but a very brief outline of the author's opinions; and that chiefly in reference to yellow fever.

Emetics, though he admits they may be proper in the incipient stage of fever, appear not to have been a favourite remedy with him, after the disease is fully established.

"It will be apparent to every body, that the morbid action in the stomach, whether primarily or sympathetically excited, while yet only beginning, must be comparatively unsettled and undetermined in its operation; and that this offers the golden opportunity, perhaps never to return, of creating a different and more healthy action by means of emetics, and thereby of rescuing the patient from the danger which awaits him. And, at the same time, it will be equally apparent, that if emetics be exhibited after certain degrees of morbid excitement shall have been actually formed and confirmed in the stomach, that they will not only be entirely incompetent to dislodge the disease, but will aid and hasten that disorganizing process which renders the system incapable of life."

In a subsequent essay we have the following sentence.

"Much has been said by practical writers, on the efficacy of emetics, exhibited at the approach of malignant fevers; and there is reason to assent, in general, to the truth of these assertions. But we believe, that abstinence may often be advantageously substituted for emetics, or other evacuants, in such cases."

Of the propriety of purgatives, he has no doubts; but, in common with the great majority of the profession in this country, he considers them, when properly chosen, well timed, and otherwise judiciously employed, to be one of our most powerful and effectual remedies in the treatment of fevers.

That sudorifics cannot be usefully employed, as a general remedy in fevers, is, he conceives, apparent, "from the fatal course pursued by many of these diseases, notwithstanding the most copious, universal, and continued sweats spontaneously take place." After a general view of the advantages and disadvantages of this class of remedies, he observes as follows:

"It may be concluded, that sudorific remedies, especially those of a more powerful kind, are, in general, highly unsafe, and calculated to augment the violence of inflammatory and malignant fevers; and that, although they

may succeed, in some cases of less violence, or by a favourable concurrence of circumstances, yet they are so constantly liable to produce mischief, and exasperate the disease, that the abuse, on the whole, must be pronounced greatly to exceed the use."

"After this attempt to restrict the use of sudorific remedies to such narrow limits, it may not be improper to recall the reader's attention to a substitute, better adapted to the nature, circumstances, and varieties of fevers. This substitute is water, of various temperature, taken into the stomach, injected into the bowels, and applied to the surface of the body."

It is proper to observe that our author had previously stated, that, in opposing the common practice respecting sudorifics, he is to be understood as having reference to

"— that kind of sweating which is excited by forcible means, by the application of external, or the confinement of bodily heat, or by the internal use of substances directly stimulant. When excited by emetics, in nauseating or full doses, or by any other means which directly diminish action in the system, it is understood to be an effect of a different kind, and not liable to the objections now offered to the practice of forcing sweats."

The following extracts from his "Remarks on the effects of abstinence at the approach of acute diseases," contain arguments, which are now daily made use of by those who have derived their therapeutical views from a different source.

"All alimentary matter, especially of the animal kind, taken at the commencement of an acute disease, is fraught with mischievous consequences. The powers of digestion are either impaired or totally suspended. No assimilation nor nourishment can take place. The stimulus of the food, immediately on its arrival into the stomach, will be added to the morbid stimuli previously operating with pernicious violence. Tottering under its present load, the system is forced to sustain new burdens. But this is not the only bad effect of receiving food under such circumstances. The alimentary matter, unsubdued and unassimilated by the powers of digestion, placed in a situation where it must undergo a rapid and noxious decomposition, will form a mass of corruption and acrimony, generating and diffusing its poison throughout the whole tract of the stomach and bowels. Can we wonder, after this, to hear complaints of flatulency, oppression and anxiety about the præcordia, pains in the bowels, diarrhœa, &c., in the course of the disease."

A few pages forward, he had remarked that,

"The French and Spaniards, in the West Indies, and in other warm climates, avoiding the use of ardent liquors, and retaining their usual habits of thin and spare diet, are observed remarkably to escape the dangers inci-

dental to such situations; while the British, carrying with them, wherever they go, not only their plethoric and vigorous habits, but likewise their national predilection for a gross and stimulant plan of living, suffer all the havoc of those baneful countries."

The pernicious effects of indulgence in food, and the great importance of total abstinence, on the accession of an inflammatory disease, our author presumes, will be denied by few; and he has attempted to show, that the same will hold equally true in all those fevers, the offspring of miasmata and contagions. As these causes produce their deleterious effects by an irritation, either directly or indirectly affecting the mucous coat of the stomach, it must, he conceives, be evident, that, by indulging repletion under such circumstances, "by heaping alimentary upon morbid stimulus," no other effect can be produced than an increased violence of the disease. He concludes his remarks upon abstinence with the following sentence:

"If it were possible to offer to mankind a maxim of universal application to the treatment of incipient fevers, in all their variations and circumstances, I should be inclined to hazard the following aphorism: *When symptoms, denoting the approach of acute diseases, are discovered, abstain, for a proper length of time, from all aliment.*"

As we have remarked already, the hints contained in the volume before us, in reference to the treatment of fevers, are so very superficial, that, excepting what is afforded us by the quotations which precede, we can derive but little satisfactory acquaintance with the author's mode of practice. From the following we discover his ideas of the mode of operation of those remedies which are commonly employed.

"The plan of curing diseases by transfer, or revulsion of excitement from one part of the system, and fixing it in another, includes a great proportion of our most powerful remedies, and opens a wide field of future discovery and improvement. The effects of mercury, in producing ptyalism,—of blisters in inflaming and vesicating the skin, and exciting strangury,—of sinapisms, other rubefacients, and of many other articles operating on similar principles, afford examples of this revulsion of excitement."

In the same class he also includes sudorifics. The referring of their efficacy

"—to a revulsion of excitement from internal organs to the skin," is, he remarks, "conformable to known laws of the animal economy, and supported by facts which fall under daily observation."

The remaining essays of which the volume is composed, are equally worthy of notice with those to which our attention has been more particularly confined. The bold and original views of the author on many points, and the superior talents which he has displayed in relation to every subject upon which he has written, fully warrant the strong language applied to him by Dr. Rush, when he pronounced him to be "second to no physician in the United States," at the period in which he lived. His entire works are strongly recommended to the attention of our readers; we being persuaded that no one of them will regret the time spent in their perusal.

In the "Report" of our author, "on the Malignant Disease which prevailed in the city of New York, in the autumn of 1805," is to be found a summary of all the leading arguments in defence of the domestic origin of the yellow fever; digested and arranged with much skill, and conveyed in a style, which is not the least recommendation of Dr. Miller's writings.

This report, soon after its publication, was reprinted in Great Britain: it was, also, translated into the French and German languages; and is inserted at length, by M. Dumeril, in his report to the emperor, on the Spanish epidemic of 1804.

In the essay entitled "An Attempt to deduce a Nomenclature of certain febrile and pestilential Diseases from the Origin and Nature of their Remote Causes," we are presented with a rational account of the causes which give rise to typhus fever, and of the circumstances upon which their production depends.

The three introductory lectures, "On the Influence of Temperature on Health and National Character;"—"On the Certainty of Medicine;" and "Upon Medical Education;" will be read with equal pleasure and profit. In the first, is displayed, in a very forcible manner, the advantages of clinical instruction as a means of acquiring practical knowledge; while, in the last, the lecturer strongly urges upon the student, the importance of a careful prosecution of morbid or pathological anatomy.

"Had" he remarks, "a severe practical study of the ordinary structure been generally followed up, for the last fifty years, by an investigation of every gradation of change induced by disease, we should, by this time, have had infinitely less uncertainty in the doctrines and principles of medicine."

The opinions of our author, in relation to medical education, taken generally, are in accordance with those of every individual who has given to the subject any serious consideration: he is an advocate for prolonging the term of study, and for augmenting the branches to which the attention of the pupil is to be directed.

"In general, public opinion and the prevalent usages of this country, permit the business of medical education to occupy so short a period, and to be hurried over with so much precipitation, that it is necessarily very imperfect, and the attainments of the student very superficial. This defect must be unavoidably experienced at every stage of his subsequent course."

The volume closes with "*Remarks on the Cholera, or Bilious Diarrhœa, of Infants.*" To Dr. MILLER we are indebted for the introduction of the plan of treating this disease by the administration of minute doses of calomel. It is not long since, that at a meeting of the Medical Society of Philadelphia, we were surprised to hear the introduction of this practice, in the disease in question, ascribed to a British physician; and we suspect that but few of our physicians are acquainted with the short, but highly valuable essay of our author, in which the attention of the profession was first directed to a mode of treatment, the value of which subsequent experience has so fully demonstrated.

We here close our remarks; with the pleasing hope, that the notice we have taken of the "medical writings" of Dr. MILLER, may be the means of introducing them to that place in the libraries of our professional friends, to which their merits so justly entitle them.

Φ. Κ.

PROCEEDINGS OF THE MEDICAL SOCIETY.

Article XVI.—*Report of the Committee on Quack Medicines.*

In conformity with a resolution of the Medical Society, at its meeting of the 16th December, we place before our readers the Report of the Committee, appointed, on the 16th June last, to make investigations, the purport of which is conveyed in the Circular published in our July number. We do not stop to praise this Report: the mass of interesting and decisive facts which it contains, on a subject so important to humanity and the profession, will be its best recommendation. Editors.

The Committee appointed by the Medical Society of Philadelphia, to inquire into the remedial value of the more prominent specifics now sold in Philadelphia, under the assumed names of Panacea, Catholicon, Minerva Pill, &c., submit the following Report:—

In obedience to the requisition of the Society, they lost no time in despatching circulars to the practitioners of Medicine in this city, and to a large number of physicians in various parts of the United States, from some of whom they have received in return much valuable information. The little attention which circulars in general are calculated to elicit, will serve to explain in part the reason of these replies not having been still more numerous.

The questions growing out of this inquiry refer chiefly to the most widely known of these pretended specifics, viz. Swaim's Panacea; and on this head the committee have pursued their investigation in the following order. 1. The sense in which the physicians, who gave their certificates in favour of the Panacea, intend their evidence to be received; as discovered by their written replies to the circular of the committee.

2. The circumstances connected with the introduction of this nostrum into the practice of the Pennsylvania Hospital and Philadelphia Alms House Infirmary, and the extent to which it was used, and the effects attending such use.

3. The nature of the general evidence, received from various sources, respecting the alleged curative, and positively deleterious, operation of this Panacea.

4. The inferences deducible from the above facts and circumstances, and the objections to the use of this, as of every other, quack medicine.

On the first point, the committee beg leave to present the following statements to the society. Dr. CHAPMAN acknowledges having 'overrated the value of the Panacea of Swaim,' and 'for a long period' he has 'entirely ceased to prescribe it,'—says he is in possession of not a few cases, which, if desired, are at the committee's service, and 'eminently calculated to alarm the public on this subject.' Sept. 29th, 1827.

Doctor GIBSON says, he has found the Panacea succeed in cases of secondary syphilis, and fail in others; and adds, "I have never found the remedy of any service in scrofula. In several cases which came under my notice, ptyalism has followed the use of it." October 25th, 1827.

Doctor DEWEES's experience of this article having been found useful, is limited to "four, or, at most, five cases;" whereas, his own practice, in which he has prescribed it several times, does not, he acknowledges, furnish a single case of any decided advantage following its use. October 26th, 1827. Doctor DEWEES does not state the evidence on which he gave his certificate to Swaim; but, it is believed, that not even half of the few favourable results now alluded to had then come under his own personal observation.

Dr. PARKE's statement, in his letter of September 28th, 1827, is, that he witnessed the case of Tregomain in the Pennsylvania Hospital; who, after being subjected to various methods of treatment, was finally cured by the somewhat prolonged use of Swaim's Panacea. The disease was 'a very obstinate malignant ulcer on her hand.' It may be well to remark, that Dr. PARKE's certificate in favour of the nostrum was furnished on the strength of this *single case*. It would be a subject of curious inquiry to ascertain

the probable number of certificates to which the practice in a large hospital would give rise in the course of a single year, if the cure of every case of a somewhat protracted disease were to lay claim to such notices. The valuable Hospital Reports published from time to time in various cities, would then give place to Hospital *Certificates*, with an effect on the march of medical improvement, of too painful a nature to be calmly contemplated.

Dr. PARKE goes on to speak of the cases of two ladies from southern states, the melancholy nature and result of which, so totally different from the tenor of his letter, will be laid before the society in a subsequent part of this report, in which it will also be seen that little, if any, credit can be attached to the Panacea as a remedial agent in Tregomain's case.*

It seems then, from the testimony of those whose certificates in favour of Swaim's Panacea have been so much relied on by the proprietor, and his friends and coadjutors, that nothing is adduced in them calculated to inspire any confidence whatever in its use. On the contrary, Dr. CHAPMAN's having long since ceased to prescribe it, and his pointing out cases of its alarming effects, Dr. GIBSON's never having seen it succeed in scrofula, the constant failures when Dr. DEWEES has prescribed it, added to Dr. PARKE's inexperience of its use, are all circumstances well calculated to deter from recommending it. The only decided effect is that pointed out by Dr. GIBSON, of its *salivating*. The physician will, however, of course, prefer prescribing himself the medicine or combination of medicines to produce salivation, when he thinks this condition of things is required by the exigencies of the case.

The committee, on application to the resident physician of the Pennsylvania Hospital, and to the Apothecary of the Philadelphia Alms House Infirmary, have obtained the following information respecting the time when Swaim's Panacea was first introduced into the practice of those institutions, during what period it continued to be prescribed, and by whom.

Dr. CHARLES MIFFLIN, resident physician of the hospital, reports, that, as well as he can learn, Dr. PRICE was the person who first directed it, and who attended as surgeon to the hospital in the years 1822 and 1823, four months in each year. Dr. PARKE, who

* See Appendix, A.

was at that time one of the physicians to the hospital, stated to Dr. MIFFLIN, that he never heard of the Panacea being used in any case in the practice of the house, except in that of R. Tregomain, already noticed. "No mention of Swaim's Panacea," says Dr. M. "is made in our book of apothecary's expenses for those years; from which I would infer that its use in this hospital was very short, and that what was used had been presented, for the sake of an experiment, the success of which is shown by its discontinuance from that day." Dr. M. states his having made inquiries of Drs. HEWSON, OTTO, and JOHN RHEA BARTON, gentlemen attached to the service of the hospital; and was informed by them that they never prescribed it in that institution, nor do they know of any other person using it but Dr. PRICE.

The cause of Dr. PRICE's admiration of the Panacea need not be dwelt on at present. It is sufficient to remark, that he went to Europe, in the year 1823, as agent of Swaim, for the vending and distribution of the Panacea. Of the results of this mission the world has not yet been informed.

Mr. GERARD S. MARKS, Apothecary to the Philadelphia Alms House Infirmary, reports, that, in the year 1822 or 1823, Swaim obtained permission from the managers of that Institution to give his Panacea a trial. The effects of this pretended specific were to fail entirely in six cases out of eight; and of the remaining two, one was ameliorated and the other cured. Of the whole number, five were of *scrofulous disease*, and three of *secondary syphilis;* in which last it exercised no beneficial tendency. The Panacea produced, after a few days, in the first patient, James Ray, affected with scrofula, most violent and alarming bowel complaint, accompanied by great emaciation, under which he sank, notwithstanding the discontinuance of the medicine, and the judicious prescriptions of Dr. PARRISH. In one of the cases of secondary syphilis, the Panacea seemed to produce temporary derangement; and in a few days after discontinuing its use the patient died. In another, of the same disease, the syrup of sarsaparilla prepared by the apothecary of the establishment, entirely relieved the patient, after the Panacea had failed to produce any effect.

In regard to the quantity of the Panacea used in the Alms House Infirmary, the committee have learned from Mr. MARKS, that, from the 30th December, 1822, to the 20th January, 1825,

sixty-seven bottles of this nostrum were purchased, at the cost of one hundred and sixty-seven dollars and fifty cents. Since the 20th January, 1825, "there has not one drop been purchased for the use of said institution."

The principal points of difference between the Panacea practice, and the regular treatment of scrofulous and syphilitic patients in the Alms House, are, in the greater number of failures under the former or empirical, and the violent and alarming symptoms following the use of the nostrum. The expenditure of so much money on those hazardous experiments, naturally gives rise to a feeling of regret, that a portion of the sum thus wasted had not been directed to securing to the afflicted patients the benefits of those natural agencies, such as pure country air, and suitable regimen and exercise, which experience has proved are the best auxiliaries to medical treatment: and which are at all times more successful in the hands of the benevolent, for the relief of bodily suffering and disease, than any or all of the inventions of quackery.

The sum of the Hospital practice is found in one solitary case. The Panacea was never purchased for the use of that institution, nor ever received as an article of regular prescription in it. And yet, this circumstance, together with all the facts connected with its use and discontinuance in the Alms House, staring him in the face, Wm. Swaim, in his book, bearing date, November, 1826, with more assurance than prudence, holds the following language: "What can be more satisfactory to the public than to know, that it is used in all institutions in this country, alike eminent for the professional skill which presides over them, and the purely benevolent purposes for which they are designed—the Pennsylvania and New York Hospitals, and the Philadelphia Alms House?" If the statement is satisfactory, as it cannot fail to be useful, to the public, they are now informed that, so far as regards the Pennsylvania Hospital and Philadelphia Alms House, the assertion of Wm. Swaim is directly the reverse of truth. His Panacea is not, nor was at the time he wrote, used in either of the institutions above mentioned.

The real nature of the hitherto imposing evidence of Drs. Chapman, Gibson and Dewees, having been exhibited, in the sense which those gentlemen, from some years additional observation of the effects of the Panacea, wish to be affixed to it, and the

entire want of support of his assertions, which Swaim can derive from public and hospital practice, having been placed in their true light; the committee next request the attention of the society, to the evidence from various quarters, respecting the effects of this medicine.

Dr. Samuel Emlen reports, that of all the patients he has met with who have used Swaim's Panacea, he has "only heard *one* say that he was benefited by its use." The first patient who came under his notice, and whose name and residence he indicates, was, in the year 1821, visited twice by him, for a scrofulous tumour. A note received from the patient, apprized Dr. Emlen of his having called in other medical attendance, at the solicitation of his brothers. After the lapse of a few weeks, this person called on Dr. E., apologized for his behaviour, at which he expressed great regret, and stated his having employed *Doctor* Swaim; from whom he had taken seven bottles of his Panacea, at $5 per bottle, without any good effect. He added, that Swaim then went to the apothecary, who had formerly made up Dr. Emlen's prescriptions in this case, and obtained some of the very same medicine which the latter gentleman had directed, and which Swaim gave to the patient. This person having detected, immediately, the medicine by its taste and appearance, was disgusted at the trick; and, wearied with the ill success of his new doctor, discharged him. Dr. Emlen having received what he conceived to be a suitable apology, took the patient again under his care, who in a few weeks was entirely well.

Another case, was that of a female slave, from Charleston, with a number of scrofulous tumours, and a cough indicative of what Dr. Emlen conceived to be incipient phthisis pulmonalis. Influenced by his views of the case, he told the mistress of the woman, that medical treatment was not likely to be of much service. The lady then mentioned her wish, that her servant should make a trial of the Panacea of Swaim; of which she had heard and read so much, in the cure of scrofula. Dr. Emlen stated, in reply, his having seen it used in many cases of genuine scrofula, without any benefit whatever. On the lady's return to Charleston, however, she had the Panacea administered to the patient; and spent $70 in the purchase of this nostrum. When she again visited Philadelphia, in the ensuing summer, she placed the slave

under the immediate care of Swaim; who continued his visits and his syrup till the patient was brought under a profuse *salivation*, when the prescriber ran away with his bottle, that she might not be tempted to take more. In vain did the mistress send message after message to the Panacea proprietor; his promises of coming directly, were never fulfilled; and the patient sank rapidly, and died, immediately after arriving at Charleston, in the autumn.

The third case given by Dr. EMLEN, was of a boy in the Orphan Asylum, in Cherry Street, who had been for years afflicted with scrofulous tumours all over the body. The disease had been treated, without success, by the different physicians of the Institution; when the committee of management bought some of Swaim's Panacea, and placed the boy under the use of it, although Dr. EMLEN protested against the measure, as a needless expense. The patient died before he had finished one bottle.

The fourth case furnished by Dr. EMLEN, was of a poor woman, just above Seventh, in Cherry Street, who earned a livelihood by selling pennyworths of yest and gingerbread, &c. This person took the Panacea during two years, for some ulceration of the throat; and expended, as she declared to Dr. E., more than sixty dollars, without relief. She afterwards moved to Decatur Street, where she died some months back. Of the conduct of the proprietor and maker of the Panacea, in continually holding out hopes of amendment of her health, which were never realized, and of his language and conduct to her, when she ceased visiting him, and had told her friends that she was worse than before she began using the medicine, the committee will, for the present, forbear to speak.

The fifth case coming under the notice of Dr. EMLEN, was of a lady ——— from Charleston, South Carolina, under Swaim's care, for ulceration of the lower lip and chin. She acknowledged to Dr. E. that she had taken twelve bottles of the Panacea, without deriving any benefit; and expressed her wish that she had thrown the money she paid for it, into the street, that some one might have been benefited by it. When this lady last visited at Dr. E.'s house, about the 20th September, she stated the excruciating pain which she had suffered all the summer, from the caustic applications of Swaim, to her chin and lip—"her under lip is entirely destroyed, by his applications, the whole length, and

she presents a horrible aspect." When asked if the disease was getting better, her reply was, "she hoped so."

Dr. EMLEN states his having seen a number of poor sailors, who applied for admission into the Hospital, after expending all the funds they had in this and other Panaceas; and a poor carter, who told him that he had spent $50 in Swaim's Panacea, for rheumatism, which had done him no good, and that his son had laid out $28 in the same medicine.

The cases of two individuals, of two wealthy and well known families, to whom enormous quantities of Swaim's Panacea had been given, without any benefit, for diseases of the skin, are indicated by Dr. EMLEN.

Dr. G. EMERSON, in a letter to the committee, dated November 1, 1827, reports cases coming under his own knowledge, in which Swaim's Panacea had been administered. The first, was of a relative of Dr. E., who was induced, by the flattering recommendation of some of her friends, to take it for the cure of a cancer. Its use was persevered in, without the knowledge of the eminent professional gentleman who attended her, or of Dr. E. himself, "until the stomach became so irritable as to be incapable of retaining sufficient food for the support of life, and the death which shortly happened, was, doubtless, hastened by inanition."

Another case was that of a young man with very severe inflammatory rheumatism, attended by two regular physicians; who, at the pressing solicitations of the family and friends, suspended their visits, in order that Swaim's Panacea might be exhibited. Swaim was sent for, and unhesitatingly promised a cure in a few days. Two weeks elapsed in the trial, and though help was still promised, and on one occasion a bottle not half emptied was taken away, and another substituted by the proprietor and vender, which was to give entire relief, the patient was no better.

Dr. EMERSON states his having known children greatly injured, by having Swaim's syrup given to them, for the removal of swellings suspected of being scrofulous, but which proving to have arisen from acute inflammation, were driven to suppuration under very aggravated circumstances.

Dr. THOMAS HARRIS, in his statement in possession of the committee, mentions, that although he never prescribed Swaim's

Panacea, yet he has witnessed the effect of its exhibition in diseases of various characters.

The first case, was of Mrs. E., who was affected with *herpes exedens* of the nose. She had been under his care at different times for two years, during which period, he succeeded in healing the ulcer several times. She afterwards resorted to Swaim's Panacea, with the effect of aggravating the ulcer, and of producing an incurable diarrhœa. During the seven years that have elapsed since she first subjected herself to Swaim's care, the ulcer has continued to increase in size.

The second case was of Capt. L., affected with indolent ulcers of the legs, who took ten bottles of the Panacea, without deriving from it the slightest benefit.

The third case recorded by Dr. Harris, is of Mr. K., a scrivener, afflicted with dyspepsia. This person applied for relief to Swaim, by whom, as might have been anticipated, the Panacea was prescribed. After he had taken the second bottle, he became *salivated*, and was affected with a mercurial eruption on his shoulders and face. On his showing the eruption to Swaim, the latter expressed his satisfaction at its appearance; and added, that his "medicine was driving disease out through his skin." The patient was thus encouraged to persevere in the use of the medicine, until he had taken a few bottles more. The effect was an increase of the *salivation*, and an extension of the cutaneous disease, until nearly the entire surface of the body was covered with it. Having been kept for three months in this state of profuse salivation, which was accompanied by mercurial ulcers, and extreme emaciation, the sufferer applied to Dr. Harris, and a medical friend of his, for relief. But it was too late; the long continued irritation produced by the Panacea, brought on ascites, or abdominal dropsy, of which he died in a few months.

Dr. Harris adds, that he has seen this nostrum used in several other cases, without the slightest advantage.

Dr. Randolph, in reply to the circular addressed to him by the committee, states, that in consequence of the Panacea of Swaim having met with a more ready sale than other similar remedies, he has more frequently known this article to be administered. The diseases for which he has seen it given, were cancer, scrofula, and bad ulcerations, seated on various parts of the body, and

for which the medicine has been used for weeks and months; and yet, he continues, "I do most conscientiously declare, that I have never known, in a single instance, a cure to be effected by it." Dr. RANDOLPH adds, that he has attended several cases, in conjunction with Dr. PHYSICK, of ulcerations and scrofula, in which the Panacea had been largely administered; and he is authorized by this latter gentleman, whose experience, powers of observation, and perfect candour, are too well known to need eulogy in this place, "publicly to declare, that he (Dr. PHYSICK,) has never seen a single case of either scrofula, or cancer, cured by the administration of Panacea, or Catholicon; and that he entirely disapproves of their exhibition in any shape whatever."

But as any man, however awkward and unskilful a marksman he may be, will, by dint of constant shooting, occasionally hit the object at which he aims; so, to the hundreds of cases of failure and mischief from the use of the Panacea, some few may be added of less sinister tendency. From Dr. ATLEE, a practitioner of medicine in this city, and from a physician in Georgia, the committee have received notices, accompanied by two specified cases of the good effects of the nostrum.

Dr. HORNER furnishes the following information, in compliance with the resolutions of the society.

About four years ago, when Dr. HORNER took charge of the patients in the Philadelphia Alms House, three were transferred to him, who were under the use of Swaim's Panacea. Two had secondary syphilis, and one, a coloured boy, about ten years of age, had what was called a scrofulous ulcer over the cheek bone. In one of the two patients, the medicine produced distressing symptoms on the bowels, and it was found necessary to discontinue it—in the remaining two it was of no service.

About two years ago, Dr. H. had under his care a labourer from Lancaster, who was suffering from stricture of the urethra, and pain in the loins. He had taken several bottles of Swaim's Panacea without his being at all benefited.

Within the last two months, (May and June,) Dr. H. treated a gentleman from Ohio, a Mr. G., who had a small ulcer on one leg, attended with varicose veins. He had taken Swaim's Panacea without any benefit, but was cured of the ulcers in less than a week by regular treatment.

"I am now," says Dr. HORNER, "attending a lad of sixteen, Joseph H., with inflammation of the knee joint, and necrosis of the tibia. He had taken Swaim's Panacea without advantage. By regular treatment he was cured of the necrosis, and is getting well of the disease of the knee joint.

"I have lately seen a lady in the country with a pustular eruption ending in dark scales; she has been subject to it for a year or two. She has taken several bottles of Mr. Swaim's Panacea; but is not cured, neither does the medicine promise to be efficient.

"I have now under charge a coachman, who has chronic purulent discharge from the urethra, with weakness of the loins. He has taken, without advantage, Mr. Swaim's Panacea, and Mr. Scott's Panacea. The disease commenced in a gonorrhœa, which he had more than a year ago."

From the same gentleman the committee have received the details of the case of Mrs. Murray, aged fifty, a child's nurse in the family of Mr. L., of this city. This person believed herself to be affected with piles for the last fifteen years; but, on examination, the disease was found to be stricture of the rectum. After a partial division of the stricture by a bistoury, the intestine above was discovered to be in a tuberculous and schirrous state. She remained some time in the Alms House: but about the 1st of July, she retired into the country, with enfeebled strength and appetite, and increase of pain, and labouring under a slight diarrhœa. When in the country she met with one of Swaim's circulars of famous cures; and through its influence, and the over persuasions of the persons around her, was tempted to try a bottle of his Panacea. The first dose disagreed with her very much, and increased the complaint and pain in her bowels: she, however, still persevered in its use, in diminished doses, for ten or twelve days, continually growing worse under its influence. On Friday, Aug. 3d, she returned to the Alms House, in a dying state, from the effects of the medicine and disease together; and on Monday night, Aug. 6th, 1827, she expired. This patient, a day or two before her death, compared the sensation which the Panacea produced upon her to that caused by a stream of fire passing through her bowels. Examination after death showed the whole of the rec-

tum to be in a state of cancer; the small intestines slightly, and the stomach decidedly inflamed; and the liver small, white, and hard.

The committee have learned, by one of their members, that in the neighbourhood of Dumfries, in Virginia, many persons had used Swaim's Panacea; eight or ten within the knowledge of Dr. SPENCE, of that place, without deriving relief from it. Among them was a lady, whose name is in possession of the committee, who had a cutaneous eruption on the face, for which she took twelve bottles of the above nostrum, and was in consequence profusely *salivated.* She was finally cured by Dr. SPENCE with a wash of lac sulphuris. Another lady, whose name is also given, took three bottles of the Panacea for violent pain in the head and face, after remittent fever; but without any other effect than profuse *salivation.*

Mrs. L., of Arch street, in this city, took eight bottles of Swaim's Panacea for chronic rheumatism, without its doing her any good whatever.

W. D., in Plum street, took several bottles of Swaim's Panacea, for an ulcer of the face, without the medicine being of any service.

D. B., in Market street, took, ineffectually, Swaim's Panacea, for ulcer of the leg, with a slightly varicose state of the veins of the limb.

A servant girl, who formerly lived with Mrs. R. M., has scrofulous enlargements of the lymphatic glands of the neck, for which she was treated during six weeks by Mr. Swaim; but so far from her condition being ameliorated, the disease went on increasing.

A physician of this city has informed one of the committee, that he has had occasion to see the Panacea employed by a dozen of persons, labouring under chronic rheumatism, ulceration, and cutaneous disease, without any benefit resulting; some, on the contrary, were made worse.

Dr. COATES has sent to the committee a statement of the real nature of the much talked of case of Robert Ryan, a patient of the Pennsylvania Hospital. The man's disease was instanced as a triumph of the Panacea, after the regular methods of treatment, by the surgeons of the house, had failed; whereas the cure was the work of nature, and was accomplished by processes, for which a very long time is often demanded. Robert

Ryan suffered under a necrosis, or death of the lower part of the thigh bone; which could not, with prudence, be removed by a surgical operation, on account of the risk to the popliteal artery and nerve, and the destruction of muscles. All that could be attempted with advantage in such a case, was, to keep open the ulcers or sores communicating with the dead and mortified bone, until this latter was separated and discharged. Of course the patient was never considered as the object of any treatment directed to the cure of his sores: they were, on the contrary, at times, dilated, and prevented from closing, for the reasons just given. The completion of the process of the separation of the dead bone, appears to have coincided with Ryan's taking the Panacea, without there being the least probability of the cure having been at all accelerated by the nostrum.*

Doctor Coates mentions the case of a child, affected with a chronic inflammation and ulceration of the ankle joint, the termination of which, in health, in the course of a year, was predicted by a distinguished surgeon of this city. The event verified the correctness of the prognosis: but the parents, eager to expedite the cure, gave it Swaim's Panacea, for nine or ten months. This is another instance of the claims of the medicine to cure, on the mere strength of fortuitous coincidence.

Several instances have come under Dr. Coates's notice, of patients, with syphilis and gonorrhœa, who had taken the Panacea for a considerable time, without receiving any benefit from it.

Mr. Kennedy, senior student at the Alms House, has furnished the details of the case of James Shaw. This man, thirty-one years of age, had, as he says, an attack of typhus fever, in the month of September, 1826; after recovering from which, he was seized with a dull heavy pain and swelling in the shoulder, followed by openings of a fistulous character, at the upper end of the bone, which became carious. Various methods of treatment were resorted to without effect, in the country, where he then resided. About the 1st of December, 1826, this patient consulted Swaim; who, without hesitation or inquiry, pronounced the disease to be scrofula, stating, at the same time, that his Panacea

* See Dr. Reynell Coates's letter, [A] in which it is shown that the Panacea had no share in the cure.

was the wonderful and only curative of this complaint, as well as of every other description of running sores. The Panacea was, accordingly, taken by Shaw for three or four months, without any benefit; but with the effect of producing a burning sensation in the stomach, and, in the course of a few days, a copperish taste in the mouth, and, after the lapse of some weeks, a disordered state of the bowels, which continued for upwards of a fortnight.

The committee, on a review of all the testimony presented to them, and a portion of which they have placed before the Society, find that the claims set forth by Swaim in favour of his Panacea, as a surpassing remedy for *Scrofula*, and on its success in which disease he rests so much of its merits, are not only without support in fact, but are entirely set at nought by the result of numerous cases, and the experience of some of our most cautious and celebrated surgeons and physicians. The opinions, deduced from extensive observation and very many facts, during several years past, by Drs. PHYSICK, GIBSON, RANDOLPH and EMLEN, are conclusive of the comparative inefficacy of the remedy in scrofula. The annals of medicine, and even popular experience and tradition, furnish a much larger proportion of cures of this disease, in its various forms and stages, accomplished by means familiar to every physician, than are proved by its proprietor and his friends to have been performed by the administration of the Panacea. A well regulated diet, and the change of residence from town to country, from a close, damp and impure air, to one clear, elastic and invigorating, have done more in this disease than all the nostrums ever invented: and when medicinal agents are to be had recourse to, the use of the various alteratives, mineral and vegetable, of the Materia Medica, under the guidance of practised judgment and careful reasoning and comparison, promise more decided, and, at the same time, salutary results, than any one agent or composition, given without knowledge of cause, and too generally without regard to the modifications of effect.

Of the curative powers of the Panacea of Swaim in *Cancer*, it is needless to speak: no evidence whatever of any the slightest efficacy of the nostrum in this dreadful disease, has been furnished to the committee. The adverse testimony is, however, strong in proof of its entire failure, in cancer.

The alleged good effects of this nostrum in that class, or,

rather, the varieties of disease, classed under the heads of *Secondary Syphilis*, *Pseudo Syphilis*, *and Mercurial Disease*, are not of such a nature as to bespeak any extraordinary confidence in its use, or to entitle it to a preference over known articles in the Materia Medica. Admitting to its full extent the imperfect testimony in favour of the Panacea, in secondary syphilis, it does not possess, thereby, any claims superior to what might be put forth for diaphoretics, of which opium is the basis; or sarsaparilla and its adjuncts, constituting what has been called the Lisbon Diet Drink, or the Compound Syrup of Sarsaparilla; or, finally, a well regulated regimen alone. But if a name is required to give a charm to the composition, the Rob of l'Affecteur, or the Syrup of Cuisinier, as prepared by the regular apothecary, ought, in all cases, to be preferred to the Panacea.

That disease called *mercurial*, as presented to the physician in hospital practice, is for the most part a hybrid, being the offspring of syphilis, and the mercury administered with a view to the cure of this latter. In other cases, of less frequent occurrence, it is the direct consequence of the excessive and injudicious use of mercury. The so much boasted powers of the Panacea, have been directed to the cure of the former variety of this malady, with, we may presume, though we have no positive evidence of the fact, some benefit. But this moderate success affords no proof of the superior advantages to be derived from the nostrum in question, and would scarcely merit notice, were it not for the inference which has been attempted to be artfully drawn from it. It has been loudly proclaimed, that a medicine which combats and destroys the noxious effects of mercury, cannot, of course, have any mercury in its composition; and an additional argument is thus adduced in favour of its superior mildness and efficacy. The reply to all this sophistry is obvious and natural. The Panacea which salivates, as that of Swaim so often does, cannot be brought forward as a remedy for diseases induced by the excessive use of mercury: but a common variety of the Panacea, from which its proprietor has excluded corrosive sublimate in its preparation, will, like any other syrup of sarsaparilla, and its vegetable adjuncts, be often useful in the mercurial disease. Still, the patient has no chance, in the hands of ignorance, viz. of nostrum makers, and venders, of a selection being made for him,

and, even though his disease be mercurial, he is in danger of taking a succession of doses of the Panacea, similar to those which first salivated, and finally brought poor K. to his end. The casual success of any Panacea or nostrum whatever, is not, in the disease under consideration, any evidence of its superior efficacy, or proof of its differing, in its constituent articles, from medicines used on such occasions, by many professional men. And it will hardly be asserted, except by implication in the unqualified praise of their friends, that ignorance of the common laws of the animal economy on the part of the proprietors of such nostrums, and the want of knowledge in the patient of all the cautionary rules growing out of the stage of the disease, and his peculiar habits and constitution during their use, furnish any strong claims for public countenance and favour, towards this class of medicines.

Of the very large number of cases of chronic and mercurial *Rheumatism* in which the Panacea has been used, instances of cures have been stated; but from what has come under the knowledge of the committee, they are not, by any means, prepared to regard it as equal to very many regular methods of treatment, recognized by the medical profession. The proportion of cures to failures, is too small to warrant any confidence in it.

The assumption of the conspicuously good effects of Swaim's Panacea in *ulcers of the throat*, and in "almost every disease of an ulcerous nature," has not been sustained by the facts before the committee. The use of enormous quantities of this medicine in some cases during many months, and even in one instance for years, has been productive of any thing but a cure for the ulcers, for which it was so confidently recommended.

In *Cutaneous Eruptions*, the nostrum in question has too often failed to entitle it to commendation in such circumstances. The case of the lady near Dumfries, in Virginia, who took twelve bottles of the Panacea for cutaneous disease, without any effect, except profuse salivation, has been already mentioned. The medicine by which she was finally cured, ought, by the rules of evidence received in favour of charlatanism, to be published as a never failing cosmetic, and remover of all cutaneous blemishes; the more especially since medical records abound with examples of the curative powers of sulphur in this class of maladies.

"*Dyspeptic complaints*" are adduced among those which the

Panacea of Swaim is intended to cure. Without dwelling on the vagueness of the term dyspepsia, and the numerous tribe of disordered sensations classed under it, it is sufficient at present to remark, that in no form of disease to which the human frame is subject, is a knowledge of its remote and exciting causes of such paramount necessity as in dyspepsia. Without a removal of these causes, usually found in the mode of life of the invalid, any medicine, or combination of medicines, will, so far from relieving, be too often found to exasperate the disease. Yet no such conditions are exacted by the proprietor and venders of Panacea; a liberal potation of the syrup is with them the *sine qua non;* whilst exemption from all the rules derived from experience of past ages, and reasoning and feeling, is claimed by the person who agrees to take this medicine. Of its pernicious effects in most of the forms of dyspepsia and disordered bowels, the committee conceive it their duty to speak explicitly; and to caution against the use of that which tends to irritate and inflame the stomach, already prone to inflammation, if not actually suffering under this state, in the disease under question. The comparison made by Mrs. Murray, of the sensation produced by the Panacea, to a stream of fire passing through her bowels, coupled with the case of Mrs. E., in whom it produced incurable diarrhœa, and that recorded by Dr. Emerson, of irremediable inability of the stomach to retain food after its use, are admonitions of too powerful and melancholy a nature to be readily overlooked, or soon forgotten. The peculiarly afflicting case of Mr. K., the scrivener, who took Panacea for dyspepsia, and the fatal case of ulceration of the intestines from its use, as recorded by Dr. Hopkinson,* are likewise commentaries on the nature of such medicines, and the ignorance of their proprietors, which must be understood by the least discerning, and produce sympathy in the most unfeeling.

It would be a source of great gratification to the committee, if they could, in imitation of the proprietor of the Panacea, say, that 'this medicine is entirely harmless,' and "that it may be given without hesitation, or the least apprehension of danger, alike to the most tender infant, and the adult, with equally beneficial results." The preceding cases show the utter fallacy of this assertion, and

* See Appendix [B].

that the syrup, in the manner in which it is often compounded by the proprietor, and prescribed by him and others, is eminently calculated to destroy the digestion and undermine the powers of life. Every reflecting person must be struck with the revolting contradiction exhibited by the friends of the Panacea, in claiming for it great power over the most obstinate diseases, and yet calling it perfectly harmless. No such agent ever has been, or can possibly be, demonstrated to operate either on the physical or moral nature of man. With the possession of properties capable of doing good, is the correspondent ability extensively and deeply to injure by their misapplication. Poisons of the most active class may sometimes be taken in minute doses, without exhibiting any deleterious effects; as we see in the preparations of arsenic, and in corrosive sublimate, occasionally prescribed by medical men. But we should be at a loss to find language sufficiently expressive of our surprise and indignation, if, on the strength of such occasional immunity, any person could be found so lost to reason and feeling as to say that Fowler's Arsenical Solution, and corrosive sublimate, disguised in syrup, might be freely given to the most tender infant, and that they were perfectly harmless.

It will be seen that, in this first stage of the inquiry, the committee have confined themselves to noticing the various effects of the Panacea, without instituting a scrutiny into its composition. They have endeavoured to ascertain the nature of its operation on the animal economy, in the same manner as they would have investigated the properties of a new article of the materia medica. But, in doing so, they are not disposed to regard the Panacea as a preparation hitherto unknown to the medical practitioner, or the constituent parts of which are not frequently employed by him in the treatment of disease. Had the committee been willing to avail themselves of all the means of perquisition which justice would seem to require, they might, perhaps, have obtained direct evidence to this effect. For the present, they prefer exhibiting to the society circumstantial evidence, and collateral proofs, which may be said, in this case, necessarily to lead to conviction. The history of the introduction of this syrup into general use, and the recipe for its preparation, as well as the circumstances under which it was obtained, are very clearly set forth in the Report of the Medical Society of the city of New York, on Swaim's Panacea,

and other depurative syrups; drawn up by Drs. PASCALIS, HAMERSLEY, DRAKE, MANLY and WATTS. It appears from this report, that about the year 1811, DR. BERGER, the elder, was joined in consultation with several physicians of New York, in the case of a gentleman labouring under a loathsome complication of disease, the sequelæ of syphilis, and the repeated and irregular use of mercury, which had resisted all the ordinary modes of treatment; and at his (Dr. BERGER's) suggestion, the Rob of l'Affecteur was given, and with good effects. "The remarkable recovery of this gentleman, and the difficulty of obtaining an adequate supply of the rob for extensive use, owing to the restrictions that at that time existed in our commercial intercourse with Europe, led Dr. M'NEVIN, who was one of the physicians in consultation, to give publicity to its composition and its worth. He accordingly published, in the third volume of the Medical and Philosophical Journal and Review, the recipe of M. ALLION, a French chemist, for its preparation. The remedy prepared according to this recipe, with the exception of substituting the bark of sassafras, or the shavings of guaiacum for the marsh reed-grass, was soon after employed by several of our city practitioners, with the usual happy results. Among many patients, Mr. Swaim, then a book binder, living in this city, experienced its beneficial effects *in his own person;* and soon after succeeded in obtaining from Dr. N. J. QUACKENBOSS, the practitioner who had administered it to him, the recipe for its formation, and the directions for its employment: whereupon, he removed to Philadelphia, and set forth the vegetable syrup, which he denominated Swaim's Panacea, for the treatment of those diseases for which the rob had been so long celebrated. In the first instance, Mr. Swaim's directions for using his panacea, for preparing the sarsaparilla ptisan, and the quantity and times of taking it, in conjunction with the syrup, were the same, nearly verbatim, as those given by Dr. M'NEVIN, in the publication above referred to, for the use of the rob; but of late he has altered the directions considerably, and has ceased to insist on the conjoined use of the sarsaparilla ptisan, even in small quantities. The flavour of the sassafras in the syrup first prepared by Swaim was very perceptible; but it is now the opinion of many that he has substituted the leaves of the Pipsisewa (Chimaphila corymbosa of Pursh) for the marsh reed grass, sassafras, or guaiacum, which we

think very probable. However this may be, the syrup also contains the oil of winter green; (ol gaultheriæ;) for its flavour is evident both to the smell and taste. Swaim's object in this addition is doubtless to disguise the other materials, and to render the medicine agreeable to the taste; but it may also be a useful addition as a stimulant and carminative, obviating that loathing and disgust of the medicine, which sometimes occurs from its long continued use."*

To this interesting statement the committee will add, that when Swaim first began to vend his syrup in this city, in the year 1820, the taste of honey was very perceptible in it, as in the original French preparation; but of late years the syrup appears to have been made for the most part, if not entirely, of sugar. The addition of the winter green serves still more to disguise its taste and the nature of the other ingredients. Had Swaim stopped here, evidence similar to that adduced in favour of the French prepara-

* That physicians generally may have it in their power to prescribe the syrup of sarsaparilla, to which Swaim has affixed the title of Panacea, we subjoin the recipe of M. Allion, above alluded to.

℞. Rad. Sarsap.

Arund. Phragmit. āā.	℥xxx.
Flor. Borag. Offic.	℥viii.
Fol. Sennæ.	
Flor. Rosar. āā.	℥ii.
Sacchar.	
Mel. Opt. āā.	℔vi.

Boil the sarsaparilla and marsh reed grass, in nine pints of water, for one hour; strain off the decoction, and pour the same quantity of water on the residuum, which is to be boiled for two hours: towards the end of the boiling, add the borage flowers, senna and rose leaves; then strain off; and to both decoctions, add the sugar and honey, and boil the whole to the consistence of a syrup.

The principal difference between this, and the recipe for the syrup of sarsaparilla, as given in the French Codex, consists in the omission of the reed grass, and the introduction of aniseed, and in the mode of preparation. This recipe was adopted by the compilers of the United States Pharmacopœia, which was formed in 1820, by merely substituting liquorice root for the borage flowers. The ordinary dose, is two to three ounces twice a day; with, or without a grain of corrosive sublimate added to each pound. The patient, at the same time, is to take freely of sarsaparilla decoction, or ptisan. The diet will, of course, be regulated by the medical attendant in accordance with his knowledge of the stage of the disease, and the peculiarities in the constitution of the patient.

The preparation, as directed by the French Codex, is nearly the same as the *Sirop de Cuisinier*, which has been for some years used in the Philadelphia Alms House Infirmary. It is made up by most of our apothecaries; and both on the score of efficaciousness and moderate price, is entitled to a decided preference over any of the Panaceas.

tion might have been extended to his; with the large reservations required by his want of knowledge of pharmacy and of medicine, and the continual misapplication of the remedy, by a wrong selection of cases: but, in an evil hour, the plan of mixing corrosive sublimate with at least certain parcels of his Panacea was adopted; and ignorance, vexatious before, was then armed with an instrument of mischief and destruction.

It must be familiar to most medical men, that a certain portion of corrosive sublimate can be suspended in vegetable syrup, and so blended as to defy detection by chemical analysis: and it has been ascertained, that the Rob de l'Affecteur has contained this mercurial salt, in the proportion of a grain, or a grain and a half, to a pint, without its presence being made sensible by chemical tests. This circumstance will explain our inability to discover the existence of mercury in certain nostrums, except by their peculiar effects; such as salivation, and the train of disorders of the digestive organs and nervous system, following the injudicious use of the mineral. Submitted to this test, the Panacea of Swaim has, beyond all doubt or equivocation, mercury as one of the ingredients frequently, though not constantly, entering into its composition. If occasion required it, a most voluminous mass of testimony might be collected in proof of this position. Some strong facts have been already placed before the Society to show the sialagogue or salivating property of the Panacea. Dr. Gibson avers, that, in several cases which came under his notice, salivation followed the use of it. The testimony of Drs. Emlen, Harris, Horner, Hopkinson, and Griffith,* is conclusive to the same effect. Among other documents on this head, the committee have been furnished with the case of a gentleman near Petersburgh in Virginia, advanced in life, who took the Panacea for several large ulcers on his legs and various parts of his body. After he had finished one bottle, and commenced on the second, he suffered from severe salivation, and an inflammation and swelling of the glands of the mouth. He now desisted from its use, and, after a time, entirely recovered from the salivation: but a fresh trial of the nostrum was followed by the same effects as before, viz. profuse salivation. The dose in which this gentleman first used the

* See Appendix (C); in which Dr. Griffith relates the history of a case of salivation from the use of the Panacea, followed by fatal hæmorrhage.

Panacea was a wine-glass-ful; but his stomach could not bear this, and he reduced the quantity to a tea-spoon-ful three times a day. The appearance of mercurial eruptions, and the disorder of the stomach and bowels, sometimes of an incurable nature, consequent on the use of the Panacea, are also still farther illustrative of its mercurial character. Reference may be instructively made to Dr. S. Jackson's letter on this subject.*

The committee, after a careful examination of the evidence, both written and verbal, submitted to them, respecting the sensible properties, presumed composition, and curative and deleterious effects on the animal economy, of Swaim's Panacea, are led to the following conclusions and opinions.—This syrup, when free from any mercurial preparation, not only fails to exhibit virtues as a curative agent superior to various compound decoctions and syrups of sarsaparilla, which have been administered in the regular practice of medicine for the last two hundred and fifty years, in the different stages of syphilis, and in chronic rheumatism and cutaneous complaints, but is inferior in efficacy to some of them, as well on account of the variableness of its composition, as from the occasional loss of the medical properties, and the adulteration of certain articles entering into it. In so large a manufactory as that of Swaim, where no supervision can be exercised on the part of a physician, nor rival efforts made by apothecaries, we are deprived of the usual pledges that the composition called Panacea shall be of uniform strength and freshness; and hence, one cause, in addition to others already assigned, of its frequent failures, in the class of diseases, so many of which are benefited by the syrup of sarsaparilla, properly prepared and judiciously administered.

When the syrup contains corrosive sublimate, the preparation is still more objectionable. While all physicians are aware of the occasional efficacy of mercury, in certain stages of syphilis, and in scrofula, cutaneous diseases, ulcers, and hepatic affections, they are also well apprized of the caution with which this metal must be administered under any form, and of the great delicacy and skill requisite in the selection of cases of the above mentioned maladies, in which it can be used without producing serious, and too often irreparable mischief. It is this knowledge which has always made

* See Appendix [D].

medical men so wary, in the use of this as well as other powerful articles of the materia medica. But that empirics, ignorant and consequently regardless of the necessity of such caution, have, at the expense of the health and lives of thousands, performed some cures by the indiscriminate use, or rather shameful abuse of mercury, especially of corrosive sublimate, and of arsenic, is a fact of frequent recurrence in the history of popular errors. We are not in possession of any salutary exceptions to the baneful tendency of the pretensions of empirics to allay suffering and cure disease. The Panacea of Swaim is on the same footing with all the quack medicines which have so often preceded its introduction. Imperfect admixture and suspension of the corrosive sublimate, and, of course, comparative inertness of one portion of the syrup, and the most deleterious and poisonous effects of the other, are some of the evils attendant on its secret manufacture. If to these be added, the indiscriminate recommendation of the Panacea for every form of disease, to persons ignorant of the nature and stage of their malady, ignorant of what they are swallowing, and totally unable to foresee, and of course unprepared to prevent or mitigate, its deleterious effects, or to avail themselves in time of the counsel and assistance of their regular medical advisers, a faint idea may be entertained of the mischief which has ensued on the use of this so much and so fatally lauded nostrum. The committee have already spoken of the pretensions of its proprietor to cure, by its means, certain specified diseases. They have exhibited the utter fallacy of these pretensions; and will now add their conviction, founded on experience, that when the same, or nearly a similar formula has been prescribed by the regular physician, success has followed its use in cases in which the Panacea had either failed to do good or was injurious. The reason of this difference of result is obviously to be found in the judicious *timing* of a remedy on the part of a physician; a word which has no place in the vocabulary of a quack, any more than the practice could be appreciated by his limited capacity. But were the merits of this or any other Panacea or quack medicine of even a decided nature, the insurmountable objection remains against receiving, under any circumstances, into medical practice, or of fostering by medical eulogy, the use of a secret compound; since there is so little certainty of its uniform preparation, that the recommenda-

tion of a bottle of Panacea to day, cannot apply to another bottle prepared to-morrow. The power withheld from the members of the medical faculty of exercising any supervision and correction in this secret manufacture, is not compensated for by any pledge which the individual, who claims the exclusive right, can furnish, on the score of talents, education, or philanthropy. No physician could conscientiously prescribe, nor apothecary vend, calomel or tartar emetic, prepared, no matter by whom, if, on inquiry and comparison, the different portions of the article were of unequal strength, and possessed of different chemical properties: still less could a physician or apothecary, with any shadow of propriety, extend the slightest countenance or encouragement to any one who should arrogate to himself the exclusive right of preparing calomel or tartar emetic, and yet refuse permission for competent persons to witness his manufacture, and to point out the errors in his mode of conducting it.

It is a matter of deep regret to the committee, as they are well assured it has long been to the society, that circumstances should render it necessary to enforce a position, the truth of which has always been admitted by the thinking men in every profession, and which was received as an axiom among physicians. A hope may now, however, be reasonably entertained, that, although the correctness of the general principle has not, as in former times, carried with it entire conviction, the direct specification of facts will, in future, produce unanimity of sentiment among medical men, notwithstanding the partial aberration into which some of them may, in a moment of misplaced good nature, have been betrayed. The time is now come, or, more correctly speaking, the necessity is as urgent as ever, for a line of demarcation to be drawn between the advocates of empiricism, with all its unavoidably attendant train of evils, and the rightful members of a liberal profession, the friends of learning and of science. What physician, who retains the high conscientious feelings of his noble calling, will subject himself to the imputation of conniving with error for the wages of imposture? Or will the eulogist of empirics and empiricism, console himself with the hard alternative of escaping judgment of corruption, at the expense of his understanding; even though an observing world should allow him the option of his sentence?

Another evil, of scarcely less magnitude than the one which

the committee have just been deprecating, is, the currency given by the daily press, to every garbled and partial statement of cures alleged to have been effected by the various nostrums now in vogue. This course is greatly at variance with the presumed duties of newspaper editors; who are not wont, in matters alien from party politics, to be the ready echoes of ex-parte statements, which may exercise a pernicious influence over the health and morals of the community. In this instance, however, their laudatory notices, whether original or republished, are well calculated to encourage a worse than lottery gambling among their poorer and less enlightened fellow citizens; by leading these latter to an expenditure of money entirely beyond their means, for which not one out of a hundred receives an adequate equivalent; while very many have their health irreparably injured. It is, at present, inconceivable, how some, who value themselves on their ripe scholarship, and who are, commonly, so prone to dilate on their sensitive regard for the public weal and the cause of justice, should signalize themselves on this occasion, as eulogists of ignorant conjecture and random experiment, even to the exclusion, in their papers, of counter and more correct statements of the true nature of the alleged wonder-working powers of Panaceas.

The best commentary on this systematized abetting of the cause of empiricism, is to be met with in the increased number of empirics, and the greater boldness and presumptuous ignorance of those who were the first in the successful career of deception. The Panacea of Swaim was used in cancerous affections, and was found to fail so signally in producing any salutary effect, as to compel its proprietor to desist from recommending it in such cases. But mark the consequence. In place of retiring abashed from public notice, Mr. Swaim, who had persuaded physicians to certify in favour of his Panacea, by alleging his ignorance of diseases and of remedies, and expressing his wish merely to prepare a useful compound, to be prescribed by them, now assumes the province of a surgeon, and, emboldened, by past immunity, from merited censure, asserts his ability to cure cancers, by certain plasters and preparations, known, as he avers, to himself alone. Swayed by the authority of the certificates of some physicians, and the frequent puffs of newspaper editors in praise of the Panacea, Mrs. *****, a lady from South Carolina, placed herself

under Swaim's care, for a corroding ulcer of the cheek and nose. After the lapse of a certain time, and the application of a plaster, which was said to have "drawn out the cancer by the root," the public was duly apprized, in the National Gazette, of the wonderful cure alleged to have been effected on this lady, after all the skill of the medical faculty had failed to afford relief. The facts are, that, though the disease was, for a while, alleviated, by means familiar to the profession, it was never cured; and is now in a worse state than before. The notoriety of this case, in consequence of conversational and newspaper puffs, induced another lady, with a cancerous affection of the chin and lip, also from South Carolina, to place herself under this new cancer doctor, of one who acknowledged that he knew nothing about diseases or remedies. Her condition has been adverted to in Dr. Emlen's communication. The third case was of a lady from Maryland; who, notwithstanding the advice of her distinguished medical attendant, to avoid harsh measures for her disease, a cancer of the breast, had recourse to Swaim, to *cure* her. He was intrusted to do that, which he never could do, on the strength of what he had never done. After many months of acute suffering from his applications, and with her disease aggravated, she has abandoned the Panacea man, and is now under the care of Drs. Physick and Horner. Facts of this nature are pregnant with instruction. If the experience of former times, and the lessons of sound and practised judgment, had been allowed their proper weight, they ought never to have happened. The responsibility for their occurrence must, perhaps, be divided; and each one concerned will, no doubt, endeavour to incur as small a share as possible.

The information obtained by the committee, in reply to the circular of the Medical Society, has been chiefly on the subject of the Panacea of Swaim: but, as far as facts have come to their knowledge, there is every reason to believe, that the other Panaceas, and the Catholicon, and Columbian Syrup, are, in composition and general effects, similar to, if not identical with, the nostrum of Swaim. The proprietors and venders of all of them publish accounts of wonderful cures, performed by their use; but all ought to be viewed with equal mistrust, and, for the reasons already given, be treated with no favour by the regular practi-

tioner, who regards himself as one of the guardians of the health of his fellow citizens.

The cases which have been related to the committee, of the harsh and violent effects of a preparation, sold under the name of Swaim's Vermifuge, warrant their cautioning their medical brethren against its use; and urging them, as far as their influence extends, to forbid mothers, or heads of families, from giving to their children, a mixture, which, at times, operates with all the harshness of a poison.

W. E. HORNER, Chairman,
THOS. HARRIS,
JOSEPH KLAPP,
CHARLES D. MEIGS,
JOHN BELL,
} Committee.

December 15, 1827.

APPENDIX.

[A]—pp. 151. 161.

Such extensive mischief has resulted to the public, and more particularly to the poorer classes of the community, from the countenance injudiciously given to various empirical nostrums, by members of the medical profession, that it becomes the duty of every one who regards the proper interests of society, to expose, as far as possible, the fallacy of the evidence urged in favour of their *miraculous* powers. With this view, I tender you the following remarks.—

Mr. Swaim, armed with a certificate, signed by Dr. William Price, and another by Samuel Mason, the one at the time a Surgeon, and the other a former steward of the Pennsylvania Hospital, has asserted, that his Panacea received the sanction of the Surgeons of that Institution, and that its effects were attended with the happiest results in those cases in which it was employed.

The facts of the case are these. By the express desire of Dr.

William Price, the two managers then on duty permitted a trial of the Panacea, under the superintendence of Mr. Swaim.

This permission was necessary, on account of a law of the Hospital, which prohibited any practitioner from interfering with the treatment of the patients, unless he was regularly elected an officer of the institution; and, as the introduction of Mr. Swaim, did undoubtedly give great offence to some of Dr. Price's colleagues in office, the step could not have been taken without the sanction of the managers. But, in granting this sanction, those gentlemen transcended their prerogative, and encroached upon that of the board.

The remedy was employed regularly, in only two cases that I can recollect; and one other employed it after leaving the Hospital. The former, to whom the certificate of Dr. Price refers, were, Mrs. Tregomain, a woman of a scrofulous diathesis, affected with extensive ulceration of the hand and cheek, apparently resulting from disease of the periosteum; and Owen Laughlin—with necrosis of the upper jaw, on the left side.

In the absence of my senior colleague, Dr. T. H. Ritchie, those patients fell properly to my care, as House-Surgeon, some time before their discharge; but, as I was unwilling to associate myself in any manner with Mr. Swaim, I took no charge of those cases, merely contenting myself with silently watching the progress of the disease.

That Mrs. Tregomain improved under the use of the Panacea, is certainly true, and that she left the house nearly well, is also true; but I can only account for the unqualified language of Dr. Price's certificate, by supposing that his sanguine admiration of a remedy, which shortly after led him to Europe, as its avowed disseminator, must have induced him to believe, too readily, and without sufficient examination, the apparent proofs of permanent cure, for I well recollect to have seen a *discharge from one of the ulcers on the cheek the very day of her quitting the Hospital.* Add to this, that Mrs. Tregomain assured me that her disease had been nearly cured at several different times, previous to her admission into the Hospital; and that, at the time of commencing the use of the Panacea, she had been for some time improving by the effect of other remedies; and we shall be inclined to doubt the very superior agency of the nostrum in this case.

This unfortunate woman went to Charleston or Savannah, with a professed, but illegal protector, who died there; and she subsequently destroyed herself by taking laudanum. I was informed by a gentleman who had received a letter from her landlord, during the inquiries growing out of the refusal of several spurious drafts of her companion, on a wealthy house in this city, that her despair was the result of her inability to gain a livelihood, *in consequence of the condition of her hand, which was "covered with sores."*

With regard to the case of Owen Laughlin, my recollection is clear, that I was astonished at the employment of the Panacea, in a case that must speedily terminate favourably by the powers of nature. The patient had a necrosed jaw, with the sequestrum loose. It came away in a short time, as might have been expected; and the patient recovered.

The same remedy was also employed in the case of a seaman, by the name of Anderson; but this patient was not placed under my eye, and I have no recollection of it.

Robert Ryan, to whom the certificate of Samuel Mason refers, was affected with necrosis, which destroyed nearly all the shaft of the bone; he generally enjoyed good health during the periods which elapsed between the removal of the sequestra; and at these times he officiated as an assistant in the surgical wards: so that the picture of misery which he is said to have suffered during the whole time of his residence in the Hospital, is certainly drawn in colours far too deep for nature. Robert suffered exceedingly at times, when a sequestrum was loosening rapidly, as occurred perhaps two or three times a year, during four or five years that I watched the case—at other times he was a gay and lively man, having no more pain to contend with, than is usual in necrosis. His last sequestrum came away while I was absent; but I have been informed, both by his physicians and himself, that, on this occasion the entire upper part of the dead shaft of the bone was removed, and Robert recovered his health with great rapidity. During this convalescence he commenced the use of the Panacea, and perhaps the most that can be said, is, that it did not retard the cure.

Thus it will be seen, that the Panacea has never been properly

introduced into the Pennsylvania Hospital; and that the few cases in which it was employed were ill selected, and of doubtful result.

R. COATES, M. D.

[B]—pp. 165. 167.

Case of Death following the Use of the Panacea of Swaim; transmitted in a letter from Dr. HOPKINSON to the Committee.

A young married woman came under my care, several years since; chiefly on account of a partial anchylosis of the hip-joint, on the right side. She was, moreover, much emaciated; and had not menstruated for a considerable time, which she attributed to exposure to cold. From her own account, it would appear, that most of her complaints arose from rheumatism; under which she had so long suffered, that her constitution appeared completely broken down. She had what I would term the scrofulous diathesis. The affection of the hip, she affirmed, was the result of exposure to a current of air, and had been considered and treated, ever since, entirely as rheumatic. In addition to this, she had, in the groin of the same side, a fistulous orifice, from which was discharged, in moderate quantity, a watery secretion. Further particulars, not being essential to the objects of this history, are omitted.

She was, at the time I saw her first, under the use of the Panacea, of which she had taken, as well as I can remember, nearly two bottles. This medicine was immediately laid aside, and she was treated mildly, according to the symptoms, the minutiæ of which are not recollected, with a moderate diet, &c. She took, for some time, however, HOOPER'S pills, for the purpose of keeping her bowels soluble, and with a hope, at the same time, of restoring the menstrual discharge. All that was done for her seemed to effect no improvement in her condition. Finally, at the urgent solicitation of her mother and herself, she was permitted to discontinue all other medicines, and to resume the use of the Panacea; which, I may observe, had been originally given to her to cure her rheumatism. Accordingly, another bottle was sent for.

A short time after this, she complained of great soreness of her mouth and throat; which resulted in a salivation, followed by diarrhœa of the most obstinate nature. These symptoms were immediately attributed to the pills which I had ordered; nor could I ever convince her, that not a grain of mercury had been given to her in my prescriptions. In this belief she died, about a week or two after the appearance of the two last named symptoms.

Before her decease, I had, from my suspicions, questioned her mother, concerning the directions the latter had received, as to the manner of using the Panacea, &c. Her unbiassed and unpretending account was to the following effect: That, first, a white powder was put into an empty bottle in her presence—that this bottle was then filled, down stairs, with the syrup, and she directed, always to shake the bottle well before the medicine was given. This injunction was faithfully and fatally pursued. Drs. Hodge and Hays both saw the case, previous to its termination; and assisted in the post mortem examinations, which developed the following state of things within.

The orifice upon the thigh, led to an extensive sinus, which had originated in a caries of some of the vertebræ. The hip-joint was not examined, but it had no connexion whatever with the sinus. In the bowels were found the most important marks of disease; for, throughout nearly the whole tract of the primæ viæ, we discovered ulcers in the mucous coat, of various sizes, and such as are said to arise from the inordinate effects of corrosive sublimate. These, at once, explained the symptoms, the obstinacy, and the result of this unfortunate case.

The presumptive conclusion, therefore, is, that this woman took corrosive sublimate, in the syrup given to her; and that from it arose those ulcerations, which induced the diarrhœa, and finally destroyed her.

I. P. HOPKINSON, M. D.

[C]—p. 169.

Case of Death from Hæmorrhage, following the Use of the Panacea of Swaim; recorded in a letter from Dr. GRIFFITH to the Committee.

The only quack medicine alluded to in your circular of June last, of which I have been enabled to judge, is "Swaim's Panacea." This I have seen administered in several cases, generally without producing any beneficial effects. In one case, however, of obstinate and ill conditioned ulcers, it was certainly of use. Of its dangerous nature when taken without due attention, I met with a melancholy instance soon after its introduction. In 182–, I was called to a man, at that time residing in Blackberry Alley, said to be dying of hæmorrhage. I found him discharging great quantities of blood from his mouth and nose, and threatened with suffocation from his inability to rise. The flow proceeded from large and deep ulcerations of the mouth, which implicated several small arteries. By the usual means, the hæmorrhage was arrested. On inquiry, I found that he had been afflicted with rheumatic pains, for some time, for which some friends had recommended Swaim's Panacea: he had taken about three or four bottles, when it produced a violent salivation, which ended in extensive sloughing of the jaws. He declared that he had taken no other medicine. Next day, I requested Dr. HAYS to see him with me, which he did. The man remained in a tolerably comfortable situation for a day or two; when the hæmorrhage again occurred, and, before any assistance could be rendered, he sank under the discharge.

R. EGLESFIELD GRIFFITH, M. D.

[D]—p. 170.

Statement of the Effects of Swaim's Panacea. By Dr. JACKSON.

The first knowledge I had of Swaim's Panacea, was in the winter of 1821–22. My younger brother, from an injury received in the ankle joint, had long been labouring under a chronic inflammation of its ligaments, and probably its cartilages; and

which eventuated in anchylosis. A small sinus remained, from which was occasionally discharged a sero-puruloid fluid, never exceeding a few drops at a time.

A zealous partizan of the Panacea, became very urgent that my brother should give it a trial. Satisfied that no means could remedy the condition of the joint; and that time, with warm weather, to admit of exercise, was alone required to restore his general strength, I was opposed to the quackery that was so much desired. At this time, a young lad of this city, Master W., was taking the Panacea, for a disease of the hip-joint; and, it was asserted boldly, was recovering from its employment. In a few months after, however, he died. A man whose neck was covered with scars, said to proceed from ulcers cured by the Panacea, was brought to my brother and the family, as a specimen of its wondrous powers. These means created so powerful an impression on the minds of my brother and mother, that they became very solicitous to employ it; and, believing no harm would probably result from its use, I withdrew my opposition, and my brother commenced taking the Panacea. I examined the first bottle that was procured; and immediately pronounced it to be the syrup of Cuisinier, a remedy I had been accustomed to prepare, and prescribe in old cutaneous ulcerations, and syphiloid affections. My opinion was, however, attributed to professional prejudice.*

At this time, Mr. Swaim requested me to accompany him to visit a patient in Kensington, affected, as he said, with a cancer, and who was about to commence with his medicine—that I might be satisfied of its powers. This patient was Mrs. Hooker; whose case is detailed very imperfectly in Swaim's pamphlet of "Cases cured, &c." page 37; and of which a certificate was given by the late Dr. KNIGHT.

* In my brother, no marked effect resulted from the Panacea at first. It was continued until he had taken six or eight bottles. While under its use, a slight cough came on that was attributed to cold: it grew worse; became unyielding; and finally, the unequivocal symptoms of tuberculous phthisis were unfolded. Early in the spring, the expectations that had been built on the amiable character, and promising talents of this youth, were blasted by his death. I have frequently reproached myself with consenting to the experimental quackery in his case; and have apprehended that the development of tubercles in the lungs, was the consequence of the irritation of the corrosive sublimate of the Panacea, in a constitution strongly disposed to scrofula.

This woman I found under a horrible salivation, brought on by an excessive use of mercury. She had been placed under this treatment by Dr. ——, of the Northern Liberties; in consequence of blotches and pimples appearing on the skin, succeeding to delivery. She had taken, according to her account, an immoderate quantity of pills, which appeared to me to contain corrosive sublimate.

At the time I saw her, the saliva was running in an incessant stream from her mouth. The fauces and gums were ulcerated, and a large ulcer existed on one of the feet. Her disease was clearly mercurial, and brought on by her attending physician.

I assured Mr. Swaim, he would find no difficulty in curing that case, and the first step towards it was throwing her box of pills into the fire: good nourishing diet, even without his Panacea, would complete the rest. The infant of this woman was emaciated, from the ill condition of its mother's milk; but I do not recollect that it had any ulcerations on its surface.

Returning from our visit to this patient, I told Mr. Swaim, I was satisfied his Panacea was the same as the syrup of Cuisinier; the mode of preparing which I mentioned to him: he turned round, and asked me if I "told that to the doctors."

The next case that fell under my notice, in which the Panacea had been employed, was that of a lady of this city, who sent for me on account of a violent ophthalmia, with which she had been attacked. Whilst examining the eye, I was struck with the mercurial fœtor of her breath, and inquired into its cause. She told me her mouth had become very sore, and the teeth were so tender she could scarcely eat; and I found, on examining the gums, she was salivated. This she insisted was impossible, as she had taken nothing but Swaim's Panacea: I assured her nothing was more likely, as I was satisfied the active principle was corrosive sublimate. Mr. Swaim called the same day to see his patient; and, when reproached for the salivation that had been induced, he declared it was produced by his medicine stirring up the old mercury in her system. This lady had not, however, for more than eight years, taken a single grain of mercury in any shape. Mr. Swaim took away the bottle of Panacea, though not half consumed, and replaced it with another.

Soon after my election as one of the physicians of the Alms

House, I gave to the apothecary of that establishment, Mr. Marks, the formula for preparing Cuisinier's syrup. It was immediately employed in some cases of cutaneous ulceration of long standing, and with great success. Since that period, it has been employed in that Institution; during which, not a bottle of Swaim's Panacea has been administered to the patients. In the Alms House, I have frequently had patients under my charge, who had been treated ineffectually by Mr. Swaim, with his Panacea; and I have had several in private practice, in which it had proved wholly inefficacious. Dr. J. Rhea Barton has exhibited to me two patients, one of true scrofula; both of whom were promised, unhesitatingly, a cure from the Panacea, but whose diseases became infinitely worse under the treatment, and were finally abandoned. One of them has since been entirely cured under the care of Dr. Barton.

SAMUEL JACKSON, M. D,

BIBLIOGRAPHICAL NOTICES.

ARTICLE XVII.—*Elements of Operative Midwifery; comprising a Description of certain New and Improved Powers for assisting Difficult and Dangerous Labours. Illustrated by Plates: With Cautionary Strictures on the Improper use of Instruments.* By DAVID D. DAVIS, M. D. &c. &c. London, 1825. 4to. pp. 345.

THIS work is divided into five sections; of which *Section I.* consists of general and introductory remarks on Operative Midwifery. *Section II.* is of the use of Obstetric Instruments. *Section III.*—Remarks on the use and special properties of the Long Forceps; with suggestions for certain other modifications of Obstetric Instruments. *Section IV.*—Of other Expedients for preserving the lives both of the mother and her offspring. *Section V.*—Of Obstetric Operations, calculated to insure the more important life of the mother.

Our readers who are unacquainted with the above excellent work of Dr. DAVIS, would doubtless be pleased to have, at least, an ample and complete outline of the author's work. In giving, however, as above, a list of his sections, we have only indicated the masses, as it were, of which the volume is composed; and are sorry that we cannot, in this place, exhibit more of the details. Such works as these are calculated to obviate the too current and injurious impressions as to the futility of close study, or extensive observation for the acquisition of a competent knowledge of midwifery; of which the duties and doctrines are thought to be few and simple. Dr. DAVIS complains of the increase of this sentiment, even among members of the profession; and justly attributes it to want of proper knowledge. Those who hold such doctrines are, says he, the very people to drive the steel into the living fœtal brain—they are "often too ignorant to recognise some of the difficulties here supposed, and therefore, probably, wholesale dealers in one or two of the capital operations of midwifery." We might cry out, alas! for Obstetrics on this side of the Atlantic, if the art requires such an apparatus of instruments as Dr. DAVIS describes in his work. An apparatus of forceps of every length, shape, curve, and form, whatsoever. In some, the blades of different lengths; in others, the two blades of different breadths, fenestræ, &c. The crotchets and instruments for removing the skull after embryotomy, are extremely well contrived, both for safety and efficacy; but

we must refer to the work itself, and to the lithographic prints, of which there are twenty, most of them containing several figures.

One might be led to suspect a great fondness for the use of instruments, in the author of so extensive a work on operative midwifery: but the author says, (p. 16,) and having read the whole work carefully we can bear witness for him: "It will, indeed, soon be seen, that there are no inducements held out in the present publication for rash experiments on human life; and that the few *additional* or *improved powers* which it professes to furnish for the art, are never recommended to be employed but by persons of ample competence, both to judge of their expediency, and to use them with perfect dexterity and success."

The author holds the following strain in relation to the subject of his volume.

"The truth is, and it should not be concealed by side wind compliments, that the entire subject of operative midwifery, has been in a state of the most abject neglect for the last forty years. By this I do not mean to assert, that instruments of one kind or another have not been employed with sufficient frequency; nor that, in many instances, they have not been employed unnecessarily during that period. God knows, the reverse is my firm conviction. What, on the contrary, I do mean to assert, is, that this essential department of obstetrics has been shamefully undervalued as a study; and its practice, as might be expected from a general incompetence for its duties, has been the subject of all sort of abuses. *I may be mistaken;* but it is really my opinion, that not one practitioner in fifty, during the last fifty years, has possessed a competent elementary knowledge of the use of obstetrical instruments, upon first engaging in the practice of his profession: and how could it be otherwise, when the proper mechanics of the art have never been made the subject of adequate instruction in our schools?"

The importance of study, careful study, is exposed as follows, in speaking of the pretensions to confidence which have no good foundation in study, in those practitioners who hope never to have difficult cases in their practice. "Supposing the real circumstances of these pretensions were to become known, how would the argument, founded on the alleged unfrequency of dangerous births, be received by a distracted husband, suddenly bereft of an almost idolized wife, his best, or perchance his only earthly treasure, by the bungling incompetence of her medical attendant? As a matter of moral right, a man surely can have no more right, as to the principle of the thing, to incur the chance, or even a remote possibility which he could avoid, of becoming the cause of a premature loss of life to one individual, than he can have of becoming the instrument of a similar fate to one hundred."

Such is the bold style in which Dr. Davis denounces the practitioner who will not take pains to make himself acquainted with his duties; and we

freely commend to the attention of the profession, the whole of his able composition on the duties and responsibilities which in this matter lie so heavily on them.

The whole volume is full of sound and careful doctrine; some of the new powers are unquestionably of great importance; the use of instruments, generally, is fenced round in so many clear, available, and merciful precepts, and the examples are so instructive, that we heartily recommend a reprint of the book for the use of the American practitioner.

ARTICLE XVIII.—*Observations upon the Origin and Latent Period of Fever.* By HENRY MARSH, A. B. M. D. M. R. I. A. Assistant Physician to Steevens's Hospital, Physician to the Institution for the Diseases of Children, Lecturer on the Practice of Medicine at the Medico-Chirurgical School, Park Street, &c. &c.—Dublin Hospital Reports, pp. 444. 536.

THE questions discussed in the essay, the title of which is given above, are of engrossing interest, not more to medical men than to society at large. On the manner in which they are decided, will rest, in a great degree, the nature of the means adapted for prevention; which, to the guardians of medical police, is infinitely more important than the best devised method of cure.

Dr. MARSH, in his paper, proposes "to consider, first, the manner in which febrile disease is produced; secondly, the symptoms which manifest themselves during the latent period; thirdly, the treatment adapted to this stage of disease." He very properly insists on the necessity of interrogating nature herself, in order for us to obtain a correct knowledge of her operations; for which purpose we must engage in the laborious task of observing minutely, and of faithfully recording her own proceedings. The author uses the words contagion and infection synonymously; adding, that no animal poison can produce its specific effects, unless it come into contact with the body upon which it acts. We regret this adoption of two words to express what he believes to be the same phenomenon, when they have received different and distinct significations from many respectable authorities, and are, moreover, really susceptible of indicating two different sets of agencies. In agreeing with him, that "whether a poison be palpable or volatile, it must, to produce its effects, be applied to the living body," we think ourselves justifiable in affirming that there is no unequivocally demonstrated volatile contagion, which cannot be shown to assume also, at times, a palpable form. The variolous poison, which, it is admitted, may act in the former way, is, we all know, unquestionably presented to us likewise, in the latter shape. Where the poison, such as the syphilitic, always assumes a palpable form, we are satisfied with the fact, and inquire no farther. But when febrile effluvia are enumerated

by the author, among the volatile and impalpable poisons, and are adduced as illustrative of contagion, we only see a begging of the question, and have a right to challenge him for proof. Certain it is, he cannot show the palpable poison, as in vaccinia and syphilis; nor can he demonstrate the volatile alternating with the palpable, as in small pox and measles; states of disease to which we apply the term contagious. We are at a loss, therefore, to see the grounds on which he applies the same word to two different series of phenomena, the product of very different and distinct classes of causes, as when he speaks of the contagion of fever; nor can we see the propriety of using two different terms for the same class of causes, as when he talks of syphilis or small pox being indiscriminately contagious or infectious. The palpable, and the volatile and palpable, ought, we apprehend, to receive significative terms, very distinct from the impalpable and volatile. Contagion is the term applied to animal poisons of the two first kinds, which both agree in being palpable; and, if the author does not think infection appropriate to the latter, or alleged impalpable cause of fever, we intreat him to select some other word, but to leave contagion where it now is.

Dr. Marsh gives a number of cases, some of which occurred under his own observation, and others were derived from his friends, in which physicians, students of medicine, nurses and others, while in attendance on patients with typhus fevers, have been suddenly assailed with an insupportable smell of the most offensive kind, which was, in some instances, followed by immediate and most intense head-ach, exhaustion of strength, and nausea. In a few hours afterwards, succeeded rigors, and all the symptoms of fever, similar to those under which their respective patients had been suffering. We transcribe one of these cases, as illustrative of the great change of treatment into which the faculty have been led, in typhus fever.

"A young gentleman was led, by motives of humanity, to visit some poor people who lived in a wretched room, in one of the narrow and filthy lanes of this city (Dublin.) There happened to be, at the time, two cases of bad fever in this small and ill ventilated apartment. On opening the door, the smell immediately sickened him. He returned home unwell, and spent an agitated and restless night. I met him on the next day accidentally in the street, and was at once struck with the remarkable change in the expression of his countenance. He was pale, his skin had a dingy, dirty appearance, there was a livid circle beneath his eyes, and he complained of great languor and debility. In the evening of that day, I visited him. I found him in bed; his eyes were deeply suffused, his cheeks much flushed, his skin intensely hot; mouth parched; tongue loaded; pulse 120, full and resisting; his breathing hurried and anxious, with frequent sighing. I immediately opened the temporal artery, and, placing him in the erect position, allowed the blood to flow in quantity about 24 ounces, until the colour fled from his cheek and lips. He felt very much relieved: and, though he spent the night in a restless manner, with delirium, yet he

awoke on the following day quite free from fever, complaining only of weakness."

Though some of the persons whose cases are recorded by Dr. MARSH, had enjoyed their wonted good health, and been exempt from any undue exertion or fatigue, prior to their exposure, yet others had been exhausted by much mental and bodily labour or previous indisposition. Thus Dr. WARING, who died of the fever, had, before his visiting a patient labouring under typhus fever, "been engaged in lecturing for Dr. CLEGHORN, during the preceding days, and had very much over-worked himself." And Dr. PARKINSON, who also fell a victim to the disease, was, at the time of his visiting a person labouring under fever, "rather weak and delicate, and affected with a slight bowel complaint." We are told, in reference to Dr. CONNOR's case, which ultimately ended in health, that, previously to the time of his having "been affected with fever, he had been a good deal cut up by hard reading and constant attendance at hospitals." The author's phraseology, when he tells us of one physician having been 'overworked,' and another 'a good deal cut up,' is no doubt intended to be familiar; but, to our ears, the language of an ostler or a soldier is not well calculated to convey very accurate ideas of the fatigue and exhaustion produced by professional exertion. Low and cant expressions ought to be at least as studiously avoided by a medical writer, as the periphrasis of highly elaborated metaphor.

Dr. MARSH, in illustration of his views of the manner in which febrile miasmata and other poisons act primarily on the living body, gives some experiments on the effects of prussic acid applied to various parts of the sentient surface. The result was, that, in a space of time not exceeding five *seconds*, the effects of this poison were, in many cases, decidedly perceptible. He infers, from these and other similar phenomena, that the deleterious effects of febrile effluvia, and other morbific emanations and volatile poisons, are not dependent immediately on absorption, but on their simultaneous sedative impressions on the sentient extremities of the nerves and brain. Allusion is made to that portion of Dr. BARRY's experiments, which go to prove the suspension, or even prevention of the action of the most powerful poisons, applied to an abraded surface, by placing over the part an exhausted glass. Dr. MARSH, in admitting the fact, contests the validity of the inference attempted to be drawn, viz: that the cupping glass operates by preventing the pressure of the air, and consequently by preventing absorption. He believes, on the contrary, that the edge of the glass presses so strongly, and at times painfully, against the skin, as to produce all the effects of a *ligature*; and thus cuts off the communication between the parts within the glass, and the rest of the system: added to which, the capillaries of the included part are immensely distended, often to a degree sufficient to produce ecchymosis and petechiæ. In fine, there is not only a suspension of absorption,

but every vital action must be impeded in a part so circumstanced: and "experiment has proved that the same effects are produced by a ligature round a limb as by the cupping glass; and a strong pressure made by a circular body without at all removing the pressure of the air, will be as efficacious as the exhausted glass. Thus the experiments with the cupping glasses neither prove "that absorption is necessary; nor, admitting its necessity, do they prove that atmospheric pressure has any thing to do with the matter."

Dr. MARSH next investigates the circumstances modifying the duration of the latent period of fever, or of that time which intervenes between the infliction of the injury (application of the cause) and the appearance of the first well marked symptoms of the disease. We find nothing very new in this part of his essay. He remarks, on that variety of fever, commonly and not inaptly termed brain fever, that it is of most frequent occurrence amongst those who have previously lived intemperately, and have been in habits of almost daily intoxication; so that drunkenness would appear to influence febrile disease among the poor, in the same manner as excessive action of the brain among the rich: and, if a comparison be instituted, a striking resemblance will be found to exist between the fever of an habitual drunkard, and the fever of those whose minds have been previously in a state of continual morbid excitement; such as those who are anxiously engaged in literary, professional, or mercantile pursuits, and whose minds are kept in a state of constant and often excessive activity. What our author states of the predisposition to disease induced by debilitating agencies, such as famine and cold, is familiar to our readers; and hence, however pertinent his observations and facts, we need not dwell on them here. He has an evident bias to the belief of the contagious nature of typhus fever—indeed he distinctly intimates his creed on this occasion. But still, with the laudable frankness of a lover of truth, more than of system, he acknowledges that he is inclined to adopt the opinion that the type of fever has not an exclusive connexion with the cause, but that it as much depends upon atmospheric influence, or constitutional diathesis, as upon the immediate source of disease. Thus, for example, he tells us, that, on occasions, intermittent fever has been the consequence of exposure to the effluvia arising from a patient affected by ordinary continued fever of the typhoid kind; typhus fever has assailed a nurse attending a fatal case of confluent small pox; and, in others, has resulted from intercourse with the patients sick of puerperal fever in a lying-in ward; and malaria is capable of producing fever of every type and form. Dr. CHEYNE furnished the author with a brief sketch of an individual attacked with a fever, the symptoms of which were the same as those of the typhus gravior of nosologists; and yet the patient had not been exposed to contagion, nor could any other causes be assigned but loss of property, and of character, and wounded pride.

Dr. Marsh concludes his instructive paper by some observations upon the treatment suited to the stage of depression, or the latent period of fever; in which we cannot at present follow him. He details the pro's and con's in the use of emetics, purgatives, and antimonials; and enjoins absolute rest during the latent period. We would say that this last embraces all that it is necessary to advise the patient to conform to; but, by absolute rest, we understand not merely rest from locomotion, but from thought and digestion, as well as from vomiting and catharsis. We forbear, for want of space, and perhaps also because we are desirous of a more fitting occasion, from proffering our own sentiments on the question of contagion in fevers, other than the exanthematous.

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Article XIX.—*De L'Irritation et de la phlegmasie; ou Nouvelle Doctrine Médicale.* Par Victor Prus, Docteur en Médecine. Paris, 1825, 8vo. pp. 294.

This is one of those numerous publications, to which the controversy in relation to the new French doctrines has given birth. It appears to us to be deserving of notice, from the circumstance of its having obtained the prize offered by the Medical Society of Gard, (Nimes,) for the best solution of the following proposition: To indicate the precise and definite sense that should be attached, in pathology, to the terms inflammation and irritation; and to draw from them useful practical inferences; the whole calculated to remove all confusion existing upon these points.

Dr. Prus is an avowed opponent of Broussais; but cheerfully admits, that, to the latter, the science of pathology is greatly indebted for the exposition of many important truths. His own doctrine he declares to be, "*entierement pathologique,*" in opposition to the "*doctrine physiologique;*" maintaining, in a long introduction, if we understand correctly the import of his arguments, that Physiology is capable of throwing but little or no light upon the nature of morbid actions; the læsions that we observe in the individual labouring under disease not being mere modifications of the healthy functions. Unfortunately, however, as it appears to us, for this purely pathological doctrine, the author found himself unable to enter into its exposition, until he had first explained his views of the physiology of the living tissues; and so strictly is his pathology based on the latter, that with their truth or falsity it must stand or fall.

Dr. Prus conceives that all the acts immediately produced by the exercise of the various tissues of which man is composed, may be reduced to four, viz. sensation, contraction or condensation, expansion or dilatation, and aggregation. A general idea of his pathology may be obtained from the

following view of his classification of diseases. He arranges all diseases into five classes.

Class I. is composed of those consisting in "an augmentation of the vital properties:" it is divided into three genera. Gen. 1. augmentation of the vital properties of the nervous tissue; giving rise to excess of sensibility; (*active neuroses.*) Two varieties; *a*, of the cerebral system; *b*, of the ganglionic system. Gen. 2. augmentation of the vital properties of the contractile tissue: excess of contractility or of contraction. Three varieties, *a*, of the cerebro-muscular system; *b*, of the muscular system of organic life; (*convulsions—convulsive movements;*) *c*, of the excretory ducts; (*coarctations, retentions.*) Gen. 3. augmentation of the vital properties of all the tissues of one or many organs; (*sthenia, local or general.*)

Class II. "Diminution of the vital properties." Three genera. Gen. 1. The diminution existing in the nervous tissue, causing deficiency of sensibility; (*passive neuroses.*) Two varieties, as in class 1. gen. 1.—Gen. 2. The diminution existing in the contractile tissue: deficiency of contractility or of contraction. Three varieties, as in class 1. gen. 2.; with this exception, that variety *c*, in place of retentions, gives rise to *relaxations, incontinences.* Gen. 3. The diminution existing in all the tissues of one or many organs; (*asthenia, local or general.*) Two varieties; *a*, without stasis of fluids; (*simple debility;*) *b*, with stasis of fluids. The product of the stasis may be retained in the enfeebled vessels; (*passive engorgements, passive sub-inflammations, or passive inflammations;*) or the product of the stasis may escape from the enfeebled vessels; (*debility with flux;*) either from a solution of continuity; (*atonic wounds, ulcers ?*) or without solution of continuity; (*passive dropsies, hæmorrhages, catarrhs, and transpirations.*)

Class III. "Augmentation of sensibility and expansibility, with suspension of contractility;" (*irritation.*) Two genera. Gen. 1. occurring in the expansile tissues not susceptible of an afflux of fluids; (*the most part of the spasms of authors—permanent dilatations without congestion—irritations not inflammatory;*) varying according as seated in the lungs, heart, uterus, stomach, intestines, &c. Gen. 2. occurring in the capillary vessels; (*irritation with afflux, or inflammatory.*) Two varieties; *a*, the product of the afflux being retained in the irritated vessels; (*active sub-inflammation, and inflammation;*) *b*, the product of the afflux being discharged from the irritated vessels; (*irritation with flux;*) either from solution of continuity; (*active wounds;*) or without solution of continuity; (*active dropsies, hæmorrhages, catarrhs, certain exhalations, and cutaneous secretions.*)

Class IV. "Diminution of sensibility and expansibility, with augmentation of contractility;" (*a condition opposite to irritation;*) either in the iris; (*increased size of pupil;*) in the penis; (*impotency;*) in the female mammæ; (*absence of milk;*) or in the neck of the uterus—in the uterus, or in the fallopian tubes; (*dysmenorrhœa, amenorrhœa, sterility.*)

Class V. "Diseases with conjoint cause; or in which the vital alteration

is only secondary." These conjoined causes are, 1. pathological fluids, properly so called, or virulent; 2. fluids not physiological, but not virulent; 3. the physiological fluids in too great quantity; (*plethora*, &c.;) 4. fluids effused, either in a cavity without external opening, or in the substance of organs; 5. fluids retained within their natural reservoirs; 6. fluids impeded in their circulation; 7. fluids having become solid and heterogeneous; (*indurations, scirrhus*, &c.;) 8. solids, deprived of life; (*gangrene, necrosis;*) 9. air or gas; (*emphysematous diseases;*) 10. miasmata, effluvia, and all poisons, the action of which is continued, and keeps up the disease it has produced; 11. excrescences, such as *polypi, steatomatous and fatty tumors*, &c.; 12. luxated and fractured bones; 13. calculi of the gall ducts, bladder, &c.; 14. foreign bodies, strictly speaking; 15. animated bodies, *worms, hydatids*, &c.; 16. in certain cases, the product of conception; (*difficult and laborious labours.*)

In dismissing this work, we may remark, that its author is one of those modern practitioners of the French school, who advocate the retention of the class of purgatives in our frequent and daily use; believing that their employment, when not carried to excess, is far from producing irritation of the stomach and bowels.

Q. R.

ARTICLE XX.—*Electro-Magnetism. Being an Arrangement of the Principal Facts hitherto discovered in that Science. With Plates of the Apparatus.* By JACOB GREEN, M. D., Professor of Chemistry in Jefferson Medical College. Philadelphia, Dobson, 1827, 18mo. pp. 216, and 4 plates.

WE are fully disposed to welcome any thing American upon the subject of electricity; a science which is so deeply indebted to our country for important inquiries, made, too, at an epocha when by far less of elaborate research could be expected of it than at the present. It is, then, with much pleasure that we see a neat little volume, containing a compendious account of those more extended views, to which the labours of a Danish chemist have given rise, and which, we apprehend, are not yet sufficiently known among many of our countrymen.

Dr. GREEN's little volume consists principally, indeed, almost exclusively, of descriptions of experiments. He does not go into long and bewildering theoretical views; and perhaps we ought to blame him for what he evidently intends as a merit, the total omission of those mathematical calculations to which the electro-magnetic powers have been subjected. While he has endeavoured to avoid disgusting youth with a parade of difficulty, we are afraid that he has neglected to point out to them labours which they ought to achieve; and has prevented those whom greater leisure, or greater

fondness for processes of abstract ratiocination might have so led, from becoming aware of the food for the mathematical faculties which these beautiful studies really afford. We are well aware, that the great mass of medical readers are not to be expected to follow out these inquiries; but they ought to be aware of their existence, and might well excuse a single chapter of too elaborate thought, in a volume which supplies their minds with so many objects of novel interest. Still, we do not, for this reason, inflict on Dr. GREEN any very severe censure; as he must be considered as dictated to, in a great measure, by the nature of the public for which he writes; and if none but the gentlemen from West Point could understand it, he cannot be very heavily condemned in not presenting such matter to a body composed, perhaps, principally of physicians.

Were we to indulge in criticism, we might allege, that the arrangement of the volume is not methodical, and that some of the descriptions of experiments are not clear; especially where they are without figures, as is occasionally the fact. The former of these objections is, indeed, the less weighty, as the volume is modest, only pretending to furnish a list of the experiments and their results, and as these are, at present, hardly sufficiently numerous and symmetrical to form an arrangement.

In the appendix are, a slight, general sketch of magnetism, an essay on Galvanic manipulations, extracted from Mr. FARADAY, notes on electric intensity, on the Aurora Borealis, and its connexion with magnetism, on the power of conducting caloric possessed by different metals, and on the *contrast between matter and mind:* some of them subjects, whose relevancy to the main object of his work is not very close.

QUARTERLY SUMMARY

OF MEDICAL AND SURGICAL INTELLIGENCE.

I. ANATOMY.

1. *Lymphatics.*—We *translate* the following article from the fourth volume of the Journal des Progrès des Sciences et Institutions Médicales.

"At the sitting of the Med. Phys. Society of Florence, March 18th, 1827, M. Lippi, (vide p. 163 of our No. 7, for July, 1827,) read a memoir in reply to that of M. Gamberai, read in the month of January. To diminish the value of those authorities in favour of whom Mr. G. had claimed the priority of discovery as regards the termination of the lymphatic vessels in veins, M. Lippi showed that the quotations referred to, do not determine either the nature of these lymphatics, their qualities as deferent or afferent, their constant occurrence, their number, nor their point of departure; and, for want of these details, he infers that those anastomoses were only regarded as anomalies, and not as a regular system of vessels: this seems to be proved by the silence of Haller, Winslow, Sabatier, Cuvier, Vicq D'Azyr, Portal, Soemmering, Bichat, Meckel, Adelon, Magendie, Sementini, and Tommasini, who omit them.

Regarding it as certain that M. Gamberai thinks the venous system is the agent of absorption, he challenges him to prove it, by demonstrating the existence of free venous capillaries, their absorbing power, and their presence in those membranes on which absorption takes place; all of which are things impossible to be proved, according to the experiments of the author; who denies to the sanguiferous vessels any participation whatever in the structure of the mucous and serous membranes, and does not suppose these membranes to be susceptible of inflammation, the contrary opinion being founded only on the redness communicated to them by the inflamed subjacent cellular tissue. Let us take the illustrious Mascagni as the representative of what is actually known on the subject of the lymphatic system. He regards the doctrine, which attributed the absorbent faculty exclusively to this system, and which had been rendered somewhat doubtful by the experiments of Magendie, Tiedemann, and Gmelin, as confirmed by the numerous lymphatico-venous anastomoses, so fully and variously demonstrated.

Mr. Lippi concludes, in the language of the illustrious physiologist of Padua, "that it is useless to answer further to the imaginary proofs of venous absorption."—From the Antologia Giornale de Sc. Firenze, &c. Maggio, 1827.

II. PHYSIOLOGY.

2. *Jouffroy on Sleep.*—When we *dream*, says M. Jouffroy, we surely sleep, but the mind does not sleep, since it thinks; the mind, therefore,

sometimes wakes while the senses sleep. It is not proved that the mind ever sleeps with the senses; for we cannot prove that the mind is not dreaming, even when we have no recollection of the dreams. People often dream, in whose memory no trace of the dream is left.

When a countryman goes to the capital, his sleep is at first disturbed by the noises of the streets; but after a few nights he can sleep as soundly at Paris, as on his farm; nevertheless, the noises remain exactly the same, and strike on his senses now, as much as at first. Why does the noise disturb him at first, and not afterwards? An analogous state of things is observable in waking. It is very difficult to fix the attention on a book when we are surrounded by persons engaged in loud conversation, but we at length acquire the power to do so, by habit. Now, says M. J., attention is the voluntary application of the mind to any subject: to have the attention distracted, is to cease to be occupied with the previous subject; it is attracted, or drawn away by a new sensation, foreign to the other; a weaker sensation will not distract from a stronger one. A man occupied with an affair that concerns his life or his reputation, thinks of nothing else; hears and sees nothing unconnected with that subject. So, in reading during loud conversation, if the surrounding persons, as well as their topics, are familiar to us, we read on; but if they are strangers, or talk on an interesting subject, our curiosity is paramount, and we cannot read. The will, however, can force us back again to the book, but cannot keep alive the attention; it wanders away, and is recalled again and again.

We become accustomed to certain sounds, so as not to notice them, not because they affect the ear differently—they affect it always in the same manner and degree, but the mind will not attend to them—it becomes accustomed to neglect them. This is a psychological, not a physiological fact.

M. Jouffroy applies the foregoing to the explanation of the state of sleep. Admitting, says he, that the senses are benumbed in sleep, they are nevertheless not more so when I have been in town a month, than when I first arrived; but, at first, the noises start me out of slumber, at last they do not. In the latter case the senses transmit the impression as completely as at first: why do I not awake then? Because the soul will not rouse the senses, for, knowing by experience what the sounds import, she is indifferent to them, and will not *attend*; if she would attend, she would wake them up—for some are shut as the eyes, and others are benumbed as the ears—she will not awaken them. Sometimes we are sensible of a violent effort to awaken the senses, which refuse, as it were, to be roused; we seem to say it is time to awake. As an example; M. J. gave orders to have a noise made in a room adjoining his bed-chamber, at a certain hour every morning. The two first mornings he awoke, but not afterwards, though the noise was the same. He tells us it was because the soul, aware of the meaning of the noise, would not awake the senses. "I forget, it is true," he adds, "this train of reasoning, but I forget many others, both sleeping and waking."

We remember to have heard President Cooper of South Carolina college relate, that a learned Oxonian was given to an inveterate habit of lying late in the morning. A lady presented him with a superb tea set of Sevres porcelain; and as he was anxious to break off his bad habits, he resolved to place one of his much valued cups and saucers under the alarm of his clock, which, though it fell loudly on the floor every morning at a certain hour, had ceased to rouse him from his slumbers. The next morning he leaped out of bed just in time to save his cup and saucer. Very well, said the bachelor, that will do—a most capital plan! Next morning he

was a second too late, and the cup was dashed into a thousand pieces. On the following day he awoke soon enough to save it, but, as the set was broken, it was not worth saving; and so he went on, day after day, till every piece was shivered to atoms. We think M. Jouffroy could not have had a better illustration of the abstracted and indifferent state of mind that occurs in sleep.

We cannot protract this article much farther; and must hasten to present our readers with the following summary.

1. The senses only are benumbed in sleep, but the mind (*l'esprit*) remains awake.

2. Some of our senses continue to transmit to the mind the weak impressions they receive.

3. The mind judges these sensations, and by virtue of these judgments awakens the senses or not.

4. The reason why the mind awakens the senses is, that the sensation disturbs it, (*l'inquiete,*) because it is uncommon or painful, or that it warns the mind to rouse them because it is the known sign of the proper time to do so.

5. The soul has power to rouse the senses, and succeeds in so doing by overcoming the numbness (*engourdissement*) which binds them up. This numbness is an obstacle to overcome, which resists more or less in proportion to its degree or amount.

Somnambulic or magnetic sleep, says M. J., is not so different from common sleep as is commonly imagined. If the organs of sense are very much benumbed, (engourdies,) in a person whose mind is deeply pre-occupied with an idea that he is in his sleep to attend to certain external and internal sensations, when he hears the voice of the magnetiser he will recognise it and concentrate his attention on these sounds—he will understand their meaning, and reply to them if they are questions. The voice commands him to *attend* to certain sensations existing in the interior of his body—he obeys, and, under this deeply concentrated *attention*, will perceive the most minute, the slightest sensations affecting the organ in question. If the mind has power to awaken the senses, the somnambulist will wake at the command of the magnetiser, at any preconcerted signal which the mind remembers.

There is very little difference between the state of the soul in sleep, and in reverie or *castle building (chateaux en Espagne.)* The reading of romances surrounds us with an ideal world, and the soul is in a condition not very different from that in which it exists while dreaming. In *reverie*, the eyes may remain open and the ears unstopped; wherefore, they transmit many more impressions than in sleep, to which the soul, occupied with its train of thought, does not pay any great *attention;* they serve nevertheless to keep up a certain consciousness of our situation.

"Every thing proves, then, that the mind in sleep is not like the body, in a *special* state; every thing proves that *it* does not sleep."—*Nouvelle Bib. Juin*, 1827.

3. *M. Hufeland's remarks on Sex.*—This gentleman has shown that the numerical ratio of the sexes, 21 to 20, is uniformly found over the whole earth, without distinction of country, climate, &c. Sex depends not on the influence of planets, the generative act, or superior sexual vigour in one or the other party to the act. The difference exists in the preformed Germ; in short, it is a predestined difference.

The union of a middle aged man with a young woman, would, without this predestination, result in the production of male offspring; also, in long wars, where the younger classes of the male population are exhausted

by battle and diseases, no change occurs in the ratio of the new born sexes. Persons of an equal age do not produce an equal number of males and females; for in these cases there are sometimes only female, and in others only male products of the sexual union.

The numerical ratio of the sexes is the consequence of a supreme law which operates at all times, in all climates, and invariably.—*Bulletin. Aug.* 1827.

4. *New theory of Vision.*—M. LEHOT, a French engineer, has published a memoir on the subject of vision, in which he contends that the retina is not the immediate seat of that sense. In many animals the retina is so constructed that it is impossible it should receive regular or uniform impressions, or in consequence thereof transmit sensations so as to give an exact idea of bodies: in the Eagle and Vulture the retina is folded or plaited, and it is impossible for a plaited membrane to receive regular impressions or transmit them.

In man the surface of the retina is rendered uneven by being penetrated at different points by blood-vessels; which, incapable of receiving impressions of luminous bodies, must prevent the images of such bodies from being continuous or whole. Besides, the explanations heretofore given of the mode by which the eye can change its form so as to adapt itself to different distances, are insufficient; and nothing has hitherto been discovered to contradict the supposition that the *vitreous humour* is the immediate organ of sight.

He thinks that the points of the luminous cones, which represent the several dimensions of the object, make their impressions on the vitreous humour, so that the eye is always adjusted for distances, whether greater or less.

We make no remarks on this theory, except that the vitreous humour not being composed of nerve seems ill adapted to the reception of *impressions.—Bulletin, June.*

5. *Functions of the Cerebellum.*—In the Archives Générales for September, 1827, is contained a long paper by M. BOUILLAUD, intended to show that the cerebellum presides over the acts of *station* and progression, and not over the instinct of *propagation.* We shall present a brief analysis of the paper to our readers; who cannot fail to be interested in all the modern discussions which are shedding so much light on the *terra incognita* of the nervous system.

SAUCEROTTE, in 1769, concluded that the nerves of the neck and back are derived from the cerebellum; and that they are crossed, or have a crossed effect, (effet croisé.) In 1809, Mr. ROLANDO taught that the cerebellum is the source and origin of all the motions; and thought that the action of the cerebellum was of the same nature with that of a voltaic pile. In 1822, M. FLOURENS says that in the cerebellum resides the property of *co-ordination,* or ordering the movements, willed by some parts, and excited by other parts. In 1823, MM. FOVILLE and PINEL GRANDCHAMP established from pathological observations that the cerebellum is the focus of sensibility. Mr. MAGENDIE, in his Physiology, 2nd edition, 1825, says, I have often seen and shown that animals deprived of their cerebellum could move very regularly. These experiments controvert the idea proposed by FLOURENS, viz: that the cerebellum is a regulator or balancer of motions. GALL has for a long time professed his opinion that the cerebellum is the organ of the instinct of propagation; and in a late edition combats *a l'outrance* the doctrines of ROLANDO, FLOURENS, &c.; and finally, in the 2nd volume of his work, published in 1826,

M. SERRES, with numerous valuable facts in his possession, adopts neither of the above opinions conclusively. According to him, the median lobe of the cerebellum is the exciter of the generative organs. The hemispheres are exciters of motion in the limbs, more especially the lower limbs. The cerebellum is the exciter of jumping, (du saut.) The tubercula quadrigemina are exciters of associated voluntary motion, or equilibration, and moreover exciters of the sense of sight, in the three inferior classes of vertebral animals.

M. BOUILLAUD had long been the partisan of GALL's opinion in the premises; an opinion that was not wholly subverted by FLOURENS's work. He therefore resolved to experiment for himself.

He did not confine himself to the method of *ablation*, or removing, piece by piece, certain portions of the brain, and determining by the consequent deficiency of certain phenomena, their causes and seats. He employed *cauterization;* which prevents hæmorrhage, besides other advantages; and found also, that by artificially irritating the brain, phenomena are produced *necessarily* similar to those which arise out of the natural stimulations of the organ. He touched the posterior median portion of a dog's cerebellum with a hot iron. The animal seemed drunk, had a peculiar astonished look of his eyes, walked in a staggering manner, sometimes going to the right, when he wanted to go left, and vice versa; he also, when he wanted to go forwards, moved backwards. This experiment was performed on the 5th, and the poor animal was *mercifully* drowned on the 8th in the evening. As the dog was completely sensible, able to move his eyes, to chew, to swallow, and to regulate the larynx, it is, says Mr. B., manifest that there must exist different *central moving forces* for the muscular apparatus. The cerebellum presides over the co-ordination of the muscular movements in *station* and *locomotion.*

He next cauterized the cerebellum of a young rabbit. The detail of the experiment is too long for this place. No paralysis was induced. The animal ate and was gay. (*assez gai!*) It must have been a French rabbit to have preserved so much of the national character in these circumstances. It played and did not appear to be sick, but it could not stand—there seemed no co-ordination of motion; while not one locomotive muscle was affected individually, though it could not combine any two of them. He cauterized the quadrigeminal tubercles in this same animal; the eyes were now drawn up, then downwards, and agitated by convulsive motions.

On a 3d rabbit a deep impress of the cautery was made, which softened and disorganized the cerebellum. In this case, motion was abolished as to any co-ordinate action of the muscles. The animal lay on its belly; to which it always returned, when thrown on its back—they pinched its tail to make it walk, it seemed to exhaust itself in *vain* efforts of the will. By a great many other experiments of a similar nature, on rabbits, pigeons, hens, cocks, &c. he comes to the following conclusions, viz: "The only constant or pathognomonic phenomena resulting from these organic læsions, are disorders or affections of the functions of locomotion, or equilibration. These phenomena are the more remarkable as they are unaccompanied with paralysis, or convulsions, properly so called. The animals could flex and extend their limbs in any direction, and this too with an uncommon celerity and force; whence it follows, that we must admit in the cerebellum a force which presides over the associated movements that compose the acts of station and locomotion, a force which is essentially distinct from that which governs the simple movements of

the trunk of the body and the members, while there exists between these forces the most intimate connexion.

M. Bouillaud agrees, therefore, with Flourens, that here resides the co-ordinative force of walking, running, flying, standing, &c.; but Mr. F. missed the truth when he thought that all the voluntary muscular motions were co-ordered here, for deglutition and some movements of the trunk were not affected.

Simple irritation of the cerebellum may excite all the phenomena of anomalous muscular movements above detailed, and which resemble epilepsy, and may be recovered from; but if you destroy the organ, the balancing or equilibrative power is lost forever.

The sensations and intellectual faculties are wholly unaffected by these læsions of the cerebellum.

In no case does a simple læsion of the cerebellum produce any pain.

M. B., though he paid strict attention to the subject, never, in any case, found an erection, or ejaculatio seminis to be consequent on his experiments upon the cerebellum. Hence he says that this organ does not appear to be the seat of the propagative instinct.

The cerebellum is not the focus or centre of sensibility. Nothing, says he, is better demonstrated in physiology than this point.

As the organ under consideration governs the co-ordinate or equilibrative movements, M. B. suggests, that a well organized cerebellum is a sine qua non to a good dancer. This puts us in mind of the late attempt to ridicule the phrenologists, by establishing a new *organo-podic, or podological system*, which would measure the human understanding by the foot, instead of by the organological lumps; and in fact, from M. Bouillaud's experiments, it is nearly manifest that the cerebellar developments can be better studied at the ballet, than any where else. At any rate, organology loses nothing by M. Bouillaud.

These equilibrative functions, like those of the understanding, are subject to the laws of education—the more they are cultivated the better are they executed. The author makes a singular observation in this place. He says, that these functions imply, at least in certain cases, a memory of motions, (*une Mémoire des Mouvemens,*) as in very complicated dances, military evolutions, &c. which require a close study and faithful memory of each particular step or manœuvre. We must therefore admit, either that these phenomena are not part of the intellectual acts, which will exclude one variety of *memory* from the rank of intellectual faculties; or that the cerebrum proper is not the seat of instincts, volitions, and intellectual faculties solely.

6. *Connexion of the human ovum to the Mother.*—Professor C. G. Carus has published, in Siebold's *Journal für Geburtshulfe*, a memoir, in which he treats of the connexion of the ovum to the mother. In 1825, he received a complete ovum, expelled by abortion at the sixth week. The embryo was five lines in length; it had no red blood, nor was there as yet any placenta formed. As the specimen was in a perfect state, the author submitted the flocci of the chorion to microscopic observations. The flocci existed on all the surface, but were most numerous on the inferior and posterior surfaces; at least such is the remark of the writer in the Bulletin, though we cannot pretend to know what mode was adopted for discovering the different surfaces; posterior or anterior, would, necessarily, be much alike. Under the microscope, the fibrillæ appeared diaphanous, branched, and, at their loose extremities, swelled out into bullæ, like those of the intestinal canal. These free extremities adhered so firmly to the membrana caduca, that several of them were broken off in attempting to detach them.

These could not be blood-vessels destined to form the placenta; for the blood-vessels never have free extremities, but are always found reflected back in the state of a noose or loop.

Heretofore no distinction has been made between the different flocci of the chorion which were supposed to give origin to the placenta.

The placenta, which is the real branchia or breathing organ of the fœtus, develops itself between the flocci. The radicles of the umbilical arteries penetrate between the flocci, and then curve back again in the manner of a loop, to give origin to the umbilical veins. These loops or curves really constitute the placenta. The fibrillæ or flocci, which are swelled out into the shape of ampullulæ, like those of the intestinal villi, and constituting like them, suckers or absorbing mouths, are wholly different from the blood-vessels, for they even exist where no regular blood-vessel circulation exists; as in moles, which grow in the uterus, by means of their absorbing power. The probability therefore, is, that they take up from the maternal surface the elements of fœtal nutrition.

The sanguineous vessels of the placenta, on the other hand, exercise a merely branchial or respiratory function. The fœtus may be supposed to be nourished without assigning to the blood-vessels a direct absorbing power. No absorbing orifices have ever been demonstrated in them, and it is more probable that they serve the purpose of respiration exclusively. —*Bulletin des Sci. Med. July.*

III. PATHOLOGY.

7. *Gangrenous Abscess of the Lungs.*—Dr. W. F. Chambers, physician to St. George's Hospital, has found, among six hundred pulmonary patients, admitted in the course of fifteen years, and nearly all examined, that there only occurred three cases of what he considers *true phlegmonous abscess.* From these he excludes those cases of circumscribed abscess discovered by dissection, in persons who have died of severe injury of the head, or any other great disturbance of the nervous system; which sometimes occur, not only in the lungs, but in the liver, spleen, and almost all the glandular and cellular parts of the body. These he considers analogous to the collections of albuminous matter in the serous cavities, which are frequently found after death under the circumstances just mentioned. During the same period, many patients have been discharged from the hospital, more or less relieved of pectoral affections; and, of these, three or four instances of pulmonary apostema have perfectly recovered.

Dr. Chambers relates two cases, one of which enabled him, by dissection, to form an analogous judgment of the other, which recovered. They seem to us to be the *circumscribed* form of *gangrene of the lungs*, described by M. Laennec, whose merits are now canonised by death. They are far from corresponding to our idea of simple phlegmon.

Dr. C. proceeds to enumerate the symptoms which characterize the disease he is describing. The sputa are of a brownish or greenish yellow colour, with an intensely fœtid smell, resembling that of rotten eggs; differing strongly, in this respect, from those of tubercular phthisis. The regular hectic fever is also "absent:" one case presented slight shiverings, flushings, and perspirations, occurring irregularly; and the other no hectic sweating at all. The clear complexion and bright colour of hectic are wanting in the countenance, and are replaced by a leaden hue; and the retrospective history of the case is that of simple inflammation. Vide p. 95 of this Vol.

The case which recovered was treated with cupping, blisters, saline draughts, gum arabic, digitalis, ipecacuanha in minute doses, lactucarium at night, and colocynth pills; and, on his recovery, with mistura ferri, mistura camphoræ, meat, and porter—the previous diet having consisted principally of milk.

8. *The Liver.*—Dr. N. R. Smith, (*Phil. Month. Journ. of Med. and Surg. Oct.*) has written an essay on the pathology of the digestive organs; in which he labours to show that sufficient importance has not generally been attached to the liver. He conceives that matters directly absorbed from the alimentary cavities, and passing to the liver through the portal circulation, as is shown by so many experiments, some of which Dr. S. has performed himself, afford a more direct explanation of the concurrence of hepatic derangement, with that of the stomach and intestines, than the direct doctrine of sympathy; and seems to think this the preferable way of explaining the most frequent cases of such connexion. The liver is thus often the first part diseased; the stimulus of unwholesome foreign matters in the cavity of its veins, being more acutely felt than on the mucous surface of the bowels. To the liver not only belongs the task of secreting bile, but the additional one of purifying [and intimately mixing] the heterogeneous blood, which comes from the stomach and intestines, loaded with saline and other various objects of absorption.

We think there is a great deal of ground for the pathological principle here inferred; but we question whether the importance of the liver is under-estimated, for example, in the warmer latitudes, or in the pupils of Dr. James Johnson, and the admirers, among whom we rank ourselves, of his treatise on Diseases of Tropical Climates. As to the theory of depuration, Dr. S. coincides with various physiologists, from Glisson and Bartholinus down, in this very probable opinion.

9. *Dr. Horner's observations on the colour of mucous membranes.* (American Journal of the Medical Sciences, No. 1.)—Our readers will recollect the collection of facts by M. Billard; vol. i. p. 441, of this Journal; also, those of Messrs. Trousseau and Rigot, vol. iii. p. 383; and those of Dr. Billard again, vol. iv. p. 396. It gives us sincere pleasure to be now able to add to this list an account of a series of American observations.

In the spring of 1827, Dr. Horner, the author of the memoir before us, commenced, in association with our respected, but absent companion in the conduct of this Journal, Dr. La Roche, a set of experiments and observations on the natural and morbid colours of mucous membranes; with a reference to an increased accuracy in future accounts of dissections. It was designed, first, to prepare materials for an accurate idea of the natural and healthy appearances of the alimentary canal, both during rest and the process of *digestion;* and subsequently to compare these with a series of diseased phenomena. The first inquiries were to be directed to brute animals; with a view to obtaining greater facility and certainty in investigating the viscera of human subjects, whenever the rare opportunity should be presented of an examination of these, underanged by irritation. Dr. La Roche's departure for Europe cut short his participation in the experiments; and Dr. Horner has continued them, and published his narrative in the above Journal.

Experiments 1 and 2.—Two sheep were slaughtered, after a fast of twenty-four hours, by cutting the throat, and subsequently dividing the spinal marrow—Mucous membrane of stomach and intestines, of *a pearl colour, slightly yellow, approaching to a light tint of bright brown; exhibiting no blood vessels, even of the largest size, except very faintly, and no red patches.*

Experiment 3.—A rabbit, pithed, three hours after feeding on green cabbage; examination made immediately after the visible capillary circulation had ceased—Mucous coat of *left half of stomach, in contact with food, of a uniform light lake, approaching to vermilion, without blotches, or shades of difference.* Right half, *containing but little food,* of the *same dull pearl colour* as that of the sheep. Small intestines, *much lighter* than stomach. (The description of these last is not perfectly clear.)

Experiment 4.—Rabbit. Abdomen opened during life. Intestines became highly injected with blood, on the outer surface, with great rapidity. Irritated the mucous coat of the colon, by *rubbing*—became *scarlet,* and an anastomosis of red vessels became visible in the outer surface, resembling a honey comb. Stomach *contained green food;* internal coat, *deep crimson lake*—on killing the animal and cutting the parts out, cardiac half became *light lake,* and pyloric half, *yellow pearl;* colour uniform, and not in patches.

Experiment 5.—Rabbit; pithed—Stomach *contained food.* Left half *lake, approaching vermilion;* right half, *dull pearl;* colours uniform, and not in patches.

Coloured figures are given for these; which, in our copy, and to our eyes, most nearly resemble, the first, the *Dutch orange,* the latter, the *buff orange,* of Mr. Syme; both diluted, the latter very much so.

Here the observations on brute animals conclude; and Dr. H. proceeds with those of human subjects.

Case 1.—There is a woman now in the Philadelphia Alms House, who, some time since, lost, by gangrene, the sphincter ani, adjoining integuments, and about six inches of the rectum. The perinæum has cicatrized; but is kept in a continual state of excoriation by the fæces, whose escape is no longer restrained and regulated by the sphincter. A distinct view is afforded of the inside of the colon, near the sigmoid flexure; the mucous coat of which is of the colour of the *vagina,* or of *newly blistered skin.*

Dr. H. considers this observation sufficient to authorize the inference, that "the nostril or the vagina, in a robust, healthy female, will probably be found to represent correctly the shade of colour, which, in life, belongs naturally to the gastro-intestinal mucous coat." We do not feel this to be conclusive: as the patient's colon, far from being "healthy," must be presumed to be in a state of irritation, of considerable severity, both from its unnatural exposure to the air, and from the influence exerted upon it by the external excoriation. The living *external* surface of the intestines we have frequently seen in animals, and, in several instances, in the human subject; and the dark, bluish gray, which it always exhibited in these cases, as it usually does in animals recently slaughtered, is hardly compatible with such a lively blood-red in the interior.

Dr. H. next details the appearances found in the interesting case of Mr. W. J., whose sudden death was preceded by difficulty of breathing, and violent pain in the loins, other symptoms not having been recorded. The *stomach* was found to contain two ounces of mucus, and to have the *sides and summits of the rugæ,* of a *very light warm sienna or bright brown,* while, in the *depressions between* the rugæ, the mucous membrane was of a *dull pearl colour.*

The jejunum contained "feculent matter, consisting of mucus, yellow bile, and cream, reduced to a homogeneous and digested mass." Its lacteals were filled with chyle. The mucous coat was of a *deeper sienna,* and of a more *uniform tinge.* Colon, containing fæces—its mucous membrane of a *dull pearl colour.*

Dr. H. thinks that, in this case, there was not the least probability of a diseased digestive apparatus. The cause of death is, however, by no means obvious from the narrative. In the parts least under the excitement

of digestion, we see the same dull pearl colour as in the observations on animals.

The writer here falls into a mode of expression, which we have occasionally met with, and which appears to us liable to create a confusion of ideas. He says, that he "never found the abdominal viscera in a state which seemed indicative of more perfect health," and this phrase is very likely to be repeated with the authority of his name: whereas, it is a plain *petitio principii*, the *natural* appearance being precisely what is to be ascertained, and not admitting, in the present mode of examination, of any authority whatever.

Dr. HORNER defines congestion to be "an accumulation of red blood in any part or organ of the body, without irritation or mechanical violence. As an example of this, he gives a case of suffocation, from an abscess over the larynx; in which, however, the cause of death appears to have been the presence of two tumours in the edges of the glottis, composed of membrane filled with serum and lymph, and producing suffocation by closing the aperture.

The minutest branches of the vena portarum were found so fully injected, as to give a light purple colour to the whole of the small intestines, externally; interspersed with mahogany coloured patches of two inches diameter.—The internal coat of the stomach *light pink*, but with the summits of the rugæ resembling red streaks, from a number of minute red dots.—No red patches, nor ecchymoses—Small intestines—internal coat covered with similar small dots—Colon contained a few of them, and was contracted.—Internal coat of *œsophagus*—white pearl colour.

In another experiment, for the elucidation of "red inflammation," Dr. HORNER found the mucous membrane of the stomach, in a rabbit, of a scarlet-lake colour, from the excitement of digestion; on applying the stopper of a bottle, wet with a solution of corrosive sublimate, greater redness was induced in the space thus irritated; which was followed, after death, by the appearance of *red blotches;* thus affording an example of the production of these blotches by a direct and visible *irritation.*

The remainder of the paper details ten very interesting cases of gastric irritation in the human subject, from the practice of Dr. HORNER, and of his friends, Drs. HODGE, ASHMEAD, GRIFFITH, JAMES, OTTO, and LA ROCHE. We should be glad, had we space, to analyse them: they are very similar to numerous examples of the same phenomena described in Europe. They are, most of them, cases of *fever*, in which the sagacity and physiologo-anatomical skill of these gentlemen, had detected those marks of local irritation which are so frequently overlooked by the nosologists.

We can congratulate our readers upon the successive, but rapid accumulation of a mass of American evidence, on these important points; most of which has been disseminated through the medium of periodical Journals. (Vide, in this Journal, MITCHELL and BELL, on the Varioloid, vol. 2. pp. 27 and 258, with coloured figures; Dr. MONGES on Yellow Fever, p. 53; Dr. WARING, v. 3. p. 1.; Dr. PARRISH, p. 51; Dr. MORRIS, p. 61; Dr. TICKNOR, p. 213, and vol. 4. p. 1. Among our cotemporaries, besides the present number, we have derived most pleasure from the excellent dissections of Dr. LAWRANCE, in the Philadelphia Journal.)

10. *New Test for Soundness of the Lungs.*—Dr. WILLIAM LYONS, Staff-Surgeon, Edinburgh, (Ed. Med. and Surg. Journal, October,) recommends the following process as a means of ascertaining the soundness of the lungs; and has found it to fulfil his most sanguine expectations, in the examination of army recruits; for which purpose he conceives that it renders the *stethoscope* unnecessary. He directs the individual to be tested, to make a full inspiration; and, during the expiration, to count, as far as he can, slowly

and audibly, without taking another inspiration. The number of seconds during which he can do this, is noted by a watch with a second-hand; and is found to "increase in proportion to the integrity of the lungs."

After the most perfect inspiration, according to Dr. LYONS, the time of counting does not exceed thirty-five seconds; and commonly, in apparently sound lungs, varies from twenty-five to thirty seconds. In confirmed phthisis it never exceeds eight, and frequently falls under six or seven; in pleurisy and pneumonia, it is from six or four to nine seconds; in hepatization, from nine to fourteen; in a strong and healthy looking young man, discovered to have dyspnœa, with a slight tinge of the lip and ear, and in another, subject to attacks of asthma, but apparently free from it at the time, and healthy looking, it did not exceed ten.

We have subjected three persons to this test, in apparent health of lungs; though two of them were affected with chronic inflammation of the glottis. A man, seventy-nine years of age, counted for twenty-seven seconds; another, of thirty years, forty seconds; a corpulent female, of sixty-five years, fifteen seconds, though never ascertained to be affected with disease in the lungs.

11. *Pneumophthisis Cyanotica. Phthisis pulmonalis with cyanosis*, or the *blue disease.* (Journal des Progrès, No. 4.)—A congeries of pulmonary tubercles has long been noticed, as a cause preventing the due closure of the *foramen ovale*, and producing that distressing malady characterized by the presence of a large proportion of venous blood in the arterial cavities. The writer of this note once witnessed a very striking case of the kind; in which a prodigious number of tubercles were found, in an advanced stage, in the lungs of a "blue child," nine months old.

Professor SCHÖNLEIN, of Wurtzburgh, has described a malady of the same nature, at a more advanced age; and one of his pupils, Dr. J. URBAN DE BERNSTADT, furnishes us with a neat memoir on the subject, as above; from which we are now quoting.

This affection, according to our author, usually develops itself "during puberty;" and is distinguished by its duration, which rarely exceeds *three months*, by the intensity exhibited in the *venous symptoms*, by pulsations of the heart and arteries, "prompt, lively, and undulating," not always occurring at isochronous intervals; by the consumptive physiognomy and habitus; by paleness of the face, and blueness of the lips; by the narrowing and flattening of the chest; by the slenderness and length of the limbs, especially of the arms and fingers, which are swelled at the extremity, resembling *drum-sticks!* At a later period, occur catarrhal symptoms, with cough, stitches in the sides, oppressed breathing, hæmoptysis, and, afterwards, purulent expectoration. In the third or fourth stage of the complaint occurs hectic fever. It differs from ulcerous phthisis, by the rapidity of its career, the absence of any species of colliquation, the dryness of the skin, the scanty expectoration, constipation, and the premature occurrence of symptoms of cerebral disease.

Non-obliteration of the foramen ovale occurs more frequently in females than in males. It has been discovered in the children of those affected with the same disease, or with aneurisms, or ossifications in the heart, &c. This state of things does not, necessarily, produce cyanosis; but is liable to give rise to it, when the patient's system is deranged by various causes: such are, an accelerated circulation, pneumonia, catarrh, pregnancy, child-birth, and violent muscular exertions.

On dissection, the *brain* is commonly found gorged with venous blood, and its ventricles distended with serosity; and one or both of the phrenic nerves, swelled, hardened, tendinous, and, as it were, suffering under *atrophy*. The heart is rounder than natural, but without any difference in

the walls of its ventricles. The foramen ovale is open; and its valves are of a reticulated structure. The blood of the heart is extremely liquid: the lungs are partly ulcerated; and the liver larger than natural, commonly loaded with venous blood, soft and doughy, seeming to bear nearly the same relation to the lungs that it does in the fœtus.

In the *treatment*, we are told, that it is out of the power of human agency to effect a *cure;* as the closure of the foramen ovale is a process which cannot be effected by any medicaments in our possession. On the other hand, however, nature possesses the power of producing this effect before the completion of puberty; and the blueness will then disappear. In order to permit this desirable change to take place, our whole care is to enable the patient, if possible, to survive those years of his youth in which the danger exists, without extinguishing the vital lamp by any of the causes which are likely to excite the disease. In this view, three indications present themselves: 1. To limit the general demand and necessity for arterial blood throughout the system; 2. to supply, in part, the function of the lungs by the subsidiary action of other organs of the body; and 3. To avoid the action of injurious causes on the lungs generally.

The first of these is to be attempted, by enjoining the most perfect repose possible; by forbidding the use of aliments containing a large amount of hydrogen, which are supposed to require a more active oxidating process in the lungs; and by directing vegetable food, watery drinks, and other similar means. The organs which are capable of assisting the lungs, are the kidneys, the liver, and the skin. On the first of these we are to act by digitalis; which possesses the additional property of diminishing the capacity of the vascular system; on the liver, by calomel, and the antiphlogistic salts; and on the skin by warm baths, acidulated with hydrochloric (muriatic) acid. The means of fulfilling the third indication are familiar: they consist in avoiding exposure to cold, &c.

Dr. U. de B. adds an exemplification of the disease, in the narrative of a case; which, though highly interesting, would not, as we apprehend, be advantageously abridged here. The cerebral symptoms existed for a short period, and consisted chiefly in a tranquil delirium, with convulsions of the extremities.

12. *On gangrene of the mouths of Children.* In a letter from Joseph Clarke, M. D., of Dublin, to one of the Editors of this Journal.

The following favour from a venerable physician of Dublin, of the high respect attached to whose character we are well aware, was, immediately on its reception, laid before the Committee of the Children's Asylum of this city. It was subsequently mislaid; and we embrace the first opportunity of offering it to our readers.

Dublin, Nov. 16, 1826.

Dear Sir,

In looking over the last number of the Medico-Chirurgical Review, published in London, in October, my attention has been attracted to an article at page 586, entitled "Cancrum oris Infantum."*

* The article here alluded to, is an abridgment of an essay on the gangrenous ulcer of the mouths of children, inserted in a former number of this Journal. The analyst in the Review has, however, chosen to prefix the above title; liable, as the reader may see, to the accusation of being incorrect, and ungrammatical, or totally barbarous. Vide vol. 2, of this work, pp. 17 and 18, foot note.

This article brought to my recollection some conversations I had, a few years ago, with my late son, Dr. JAMES CLARKE, then one of the Physicians to the House of Industry in this city. My son described to me a gangrenous affection of the mouth in a crowded ward of children, which baffled all the efforts of the members of the medical profession attached to that great establishment; and begged to know what I would try in similar circumstances. I suggested borax in various forms, and brisk purgation.

My son found the whole of this establishment *badly ventilated*, and *overcrowded* with inmates. In proportion as ventilation was improved, and numbers diminished in each room, my son had the satisfaction to find the gangrenous disease of the mouth to *disappear*, and the general health of the young creatures to amend.

For great improvements effected in a noble charitable asylum in this city, I refer you to an essay of mine in the 3d volume of the Transactions of the Royal Irish Academy.

I mention these suggestions with diffidence; but not without a hope that some public benefit may arise from requesting your attention to them. Persuaded that you will excuse this intrusion, I remain, &c.

JOSEPH CLARKE, M. D.

To B. H. COATES, M. D. Rutland Square.

13. *The same.*—Dr. S. JACKSON, of Northumberland, writes us as follows, respecting the disease described in a former number of this Journal, as compared with that of which he has published a description, under the name of gangrænopsis.

"The present summer, I had three children most alarmingly salivated, with a sudden gangrene on the inside of the cheeks; I blistered, and used the solution of ʒss. of sulphate of copper to the ounce of water, with such astonishing success, that the whole disease went off in a few days, leaving healthy ulcers. These cases afforded a convincing proof that the gangrænopsis is a very different thing. They resembled it in nothing; not even in the appearance of the gangrene."

14. *An Account of a Gelatinous Cyst occupying the left side of the Tuber Annulare.*—This case is recorded in the *Bulletin de la Société Anatomique*, and inserted in the *Nouvelle Bibliothèque Médicale*, for July. The subject was a female forty years of age, who was received into the hospital of St. Louis, on the 16th of December, 1826. In the year 1815, she complained of pain in the left side of her face, shortly after having suffered much from fright. Two years afterwards she married; and no long time elapsed subsequent to this event, until her menses left her, and the pains of her face, before tolerable, and recurring at intervals, now became so intense, as to forbid her attempting any thing which required the least attention. The slightest mental emotion produced exacerbations. A belief entertained by her medical advisers, that the disease was neuralgia, occasioned by carious teeth, induced her to go to Paris, and have them extracted by M. DESIRABODE. Her pains disappeared, but only for a few hours; after which they returned with renewed violence. From this time, she experienced severe lancinating pain, which, beginning at the left side, extended all over the face. Sometimes she would rise suddenly and seem to fly some danger, seizing hold of any object near her. She was giddy when walking, and felt as if intoxicated. Creeping and convulsions of the muscles of the face, complete the picture of her situation during the first period of her disease. Subsequently to this, the pains of the face diminished, and were replaced by a feeling of cold. The deep seated pains, on the contrary, retained all their intensity.

The following were the symptoms evinced by the senses and muscular system, on the admission of the patient into the hospital. 1. The left lower eyelid was depressed towards its external angle; but vision was complete, and colours were distinguishable until death. 2. The left side of the face was completely paralytic, and the commissure of the lips was powerfully drawn towards the right side. The left nostril was motionless, and the patient could only take snuff on the other side. The face was alternately pale, and bathed in sweat, or highly coloured. 3. The sense of smell was entire; and B——, who never took snuff prior to her indisposition, was afterwards always asking for it; and experienced pleasure in making use of it. 4. It was difficult to ascertain to what extent the sense of hearing was altered. 5. From the invasion of the disease, the sense of taste had gradually been enfeebled; so that, a few months before her death, she could not tell one aliment from another, except sugar, the relish for which she retained to the last. Deglutition was performed with extreme difficulty; the food, on arriving at the pharynx, was in greater part rejected. The voice was still formed; but speech was almost gone. The patient could only give the monosyllabic reply of negation or assent. The muscular action of the right side of the body was entire; this side of the trunk was curved, like the arc of a circle, especially when the patient was in bed. The left thoracic and abdominal members, had lost much of their feeling and power of motion: but they were not in a state of complete paralysis. Occasionally, the heart seemed to cease beating; and hence the paleness of the face, loss of thought, and, in a measure, absence of all life. The respiration, for a time, would become impeded and laborious; and it seemed as if the necessary strength was wanting for the performance of the function.

The patient, during several months' residence in the hospital of St. Louis, was not subjected to any other treatment than rest and demulcents. She finally sank under a latent pneumonia.

Dissection, performed twenty-four hours after death, exhibited the following appearances. The exterior habit of the body, presented general emaciation. The left side of the face, and the left arm and leg, appeared somewhat smaller than the corresponding parts on the right side. The viscera of the abdomen were sound. The left lung was healthy, and without adhesion; the right exhibited pneumonia in the first degree. False albuminous membranes were seen in some parts of its surface, and the remainder of it was adherent to the ribs, by false membranes, organized; the mark of an old pleurisy.

The cranium being laid open, there were seen traces of chronic arachnitis, characterized by adhesions of the cerebral to the parietal arachnoid, especially on a level with the anterior clinoid processes. The brain was carefully laid bare; the anterior lobes raised; and the nerves cautiously cut, at the moment of their entrance into the foramina at the base of the cranium. After having cut the tentorium cerebelli carefully on each side, there was perceived a tumour of a yellowish colour, smooth externally, of a gelatinous consistence, of the size of an egg, knotted, and presenting deep fissures, united by vascular filaments. This tumour seemed to have been developed between the arachnoid and pia mater. Resting on the basilar surface, before the auditory foramen and the anterior condyloid foramen, it sent considerable prolongations between the summit of the pars petrosum, and the anterior clinoid process: this last prolongation occupied the middle cerebral fossa, compressed the gangliform enlargement of the trifacial or fifth nerve, and seemed in a manner blended with a great number of filaments of this ganglion, which was itself atrophied. The external motor nerve of the eye, the external carotid artery, and the ophthalmic branch, were compressed by the internal border of the prolongation of this tumour. The

common motor nerve, and the pathetic and ophthalmic nerves, were united by a dense cellular tissue, which seemed to have been the seat of inflammation. This tumour was separated from the bones of the cranium, by the arachnoid and dura mater. It was covered by the inferior and posterior position of the middle lobe, and a part of the extremity of the posterior lobe, by the left peduncle of the cerebrum, and the peduncle of the cerebellum of the same side. All these parts were very visibly diminished in size, and atrophied; and exhibited a deep pit corresponding with the surface of the tumour. The tuber annulare, which seemed to be the special seat and point of departure of the tumour, presented, on the right side, a projection of some lines extent; so that the basilar artery was thrown to the right. All the left border was depressed, and thrown back out of its situation. The left lobe of the cerebellum was directed backwards by the tumour; so that the superficial fibres placed transversely, which aid in the formation of the cerebellum, represented a kind of curve, the concavity of which was thrown backwards. Necessarily, then, the left lobe must, in this direction, have projected beyond the right.

The appearance of the nerves was not less interesting. At the inferior part of the tumour, was the trifacial or fifth nerve, which passed directly beneath it, and seemed, as it were, confounded with a kind of false membranes; its filaments were short; it was white and flat. This nerve, in its course into the cranium, was accompanied by the tumour, as far as the middle cerebral fossa, and appeared as if united with it. Its substance was penetrated by many vessels. The left external motor nerve of the eye, which also accompanied the inferior part of the tumour, was evidently augmented in size, and enlarged in the middle of the tumour; but it could be readily detached from the cyst. The facial, acoustic, and hypoglossal nerves, and those which pass out by the left foramen lacerum, were compressed. The optic and olfactory nerves, which had not at all suffered from pressure, were entire. The tubercula quadrigemina were small.

The cerebrum did not exhibit any change in its structure. The medulla was sound. On the spinal portion of the arachnoid, some laminæ of false membranes were found, which seemed to be in a cartilaginous state.

The tumour, when cut into slices, seemed to be composed of numerous cells, which formed as many cysts. These cells contained a yellowish gelatinous substance, covered with a transparent membrane.

The reporters of this case, Drs. Jobert and Cazenave, point out the inferences which may be drawn illustrative of the functions of the different nerves, compressed or affected by the tumour. The pains of the face, so acute at first, are referable to a neuralgia of the fifth pair, as their subsidence may be explained by subsequent pressure on the nerve exerted by the tumour. The almost entire loss of taste is accounted for in the altered condition of the lingual branch of the fifth pair. But the integrity of the senses of vision and smell would militate against the experiments of Magendie; since this state of things existed, notwithstanding the fifth pair was so much interested. The compression of the left facial nerve explains the immobility of the nostril of that side, and why the commissure of the lips was drawn to the right. Ought the difficulty of deglutition and respiration, and the morbid state of the circulation, to be attributed to the compression of the glosso-pharyngeal, pneumo-gastric, and spinal nerves? The slow and gradual abolition of speech, is readily explained by the pressure of the tumour on the great hypoglossal nerves. That the intellectual faculties should be entire, might naturally have been expected, considering the integrity of the cerebrum. The evidence of this integrity and sanity of intellect could only be expressed by gesture, as speech was wanting. But it was fully proved on the occasion of one of the patient's relations visiting her,

she blushed, and changed colour, and the face here expressed what the tongue could not. We may, perhaps, suppose the acute pains of the head to have depended on the irritation and turning back of the pons varolii, or tuber annulare.

The incomplete hemiplegia of the same side with that compressed, is explained in part, by the observations of GALL and BLANDIN; from which it would seem, that whenever the effusion or alteration existed in the extreme end of the posterior lobe formed by the olivary bodies, the irritation was transmitted directly to the same side of the body, because the olivary bodies do not, in their course, interlace like the corpora pyramidalia. But in the case under notice, the explanation will not hold, since the pyramidal bodies were as much compressed as the olivary ones.

IV. PRACTICE OF MEDICINE, THERAPEUTICS, AND MATERIA MEDICA.

15. *Compression by a roller in Acute Rheumatism.*—The June number of the *Archives Générales de Médecine* contains a paper by Dr. L. J. VARLEZ, of Brussels, in which he details the good effects of compression by means of rollers in cases of articular inflammation, known under the names of acute articular rheumatism, fibrous rheumatism, arthritis, *arthritis rheumatica, &c.* He mentions his having been induced to try this means, in consequence of the fortunate results attending a similar process in phlegmonous erysipelas in the hands of Dr. VELPEAU. General and local bleeding had been practised by Dr. VARLEZ without relief ensuing: nor was the application of the bandage over the affected joint and limb at first followed with an abatement of the pain; but, after the lapse of two or three hours, and the use of an emollient wash, allowed to transude through the roller to the part, the patient obtained ease, and gradually an entire relief from the disease.

16. *Tincture of the Leaves of the Datura Stramonium in Neuralgic Affections.*—In the July number of the above Journal, we meet with histories of four cases of neuralgia, two maxillary, one frontal, and one plantar, cured by frictions of the tincture of the leaves of the datura stramonium, under the direction, and by the advice of Dr. DE KIRCKHOFF. We have already made our readers acquainted with the happy results of the extract of the leaves of this plant, in this gentleman's hands, in the relief of chronic rheumatism.

17. *Bark of the Root of the Pomegranate Tree in Tænia.*—A case is recorded, in the *Archives*, of the cure of tænia, as follows. The patient, a female, thirty-two years of age, who had suffered for eight years from the presence of tape worm, was directed by Dr. ETIENNE MOULIN to take a decoction of the fresh bark of the root of the pomegranate, prepared by boiling down three ounces of the bark in three pints of water, until it was reduced to three glass-fuls—this to be divided into three doses, and to be taken in the morning, cold, at intervals of half an hour. She was, besides, enjoined to take, on the evening prior to the use of the decoction, two ounces of fresh castor oil, and two hours after the last glass of the decoction in the morning, two more ounces of castor oil. During the night, after the first dose of the oil, she had fifteen or sixteen stools, but *not a particle of the tænia was discharged.* In the morning she took, at half-past five, the first glass of the decoction, which she vomited up at six. Nothing discouraged, she swallowed the second dose; which was followed in a quarter of an hour by colic and three stools.

At half-past six, the patient took the third glass, and, in half an hour afterwards, she discharged by stool a long worm: it lived for ten minutes, and moved about with much vivacity. After the lapse of two hours, the other two ounces of castor oil were taken, and produced fifteen stools, in which some portions of the tænia were found. The worm is the *tænia solium*. The patient soon recovered her former health and natural looks and expression. The Editors of the Archives consider the quantity of the bark prescribed as too great. An ounce and a half to two ounces usually suffice.

18. *Tannin in Menorrhagia.*—Dr. P. Porta, after detailing his success in arresting menorrhagia by the administration of tannin, in three-grain pills, repeated every three hours, draws the following conclusions.

1. This medicine acts in a special manner on the uterus, whenever this organ is the seat of an irritation, which gives rise to an active or hypersthenic menorrhagia, and also when this discharge is the consequence of chronic metritis.

2. In menorrhagia, the effect of acute metritis, the inflammation must be first combatted by copious and repeated bleedings, and then recourse is to be had to the tannin.

3. The action of this medicine is of no avail against uterine hæmorrhages resulting from an organic alteration of the uterus.

4. This agent ought to be preferred to all others in the treatment of menorrhagia, not only on account of the promptitude with which it arrests all the unpleasant symptoms, but because its efficacy is displayed in so small a dose, that the stomach supports it very readily, even though this viscus be irritated or rendered more irritable by the exhaustion of the patient.—*Archiv. Gen. from the Annali Universali de Medicina, April*, 1827.

19. *Pretended Sulphate of Jalapine.*—In the session of the French Academy of Medicine on the 14th July, 1827, M. Pelletier announced to the section of pharmacy, that the substance sent to the Academy as a sulphate of jalapine by Mr. Hume, an English chemist, was, in fact, a compound made up of sulphate of lime and sulphate of ammonia. If it really purge, as was alleged by the preparer of it, in the dose of a grain, of which, by the way, we may entertain strong doubts, the effect must, as M. Pelletier thinks, be owing to a strong prepossession, a circumstance observable of other inert substances.

20. *Filings of Silver in Intermittent Fever.*—Among the many infallible remedies for the cure of intermittent fever, silver filings are perhaps the latest. According to M. C. E. Mayer, a goldsmith of Buckebourg administers them with success in doses of fifteen grains, a little before the expected return of the paroxysm. If the first dose fail, the second, we are told, is invariably successful. In no disease is there such perpetual aliment furnished to quackery as intermittent fever. Even our regular methodical gentlemen of the faculty will, if at all baffled in the use of the bark, be found hunting after this or that remedy, in place of preparing the patient's stomach and blood-vessel system for the cinchona and its various preparations. We too often forget that the remedial virtues of every drug are relative, and that the same medicine which is little better than poisonous to-day, will often, after the lapse of twenty-four or forty-eight hours, act like a charm for the relief of pain and cure of disease. The triteness of this remark renders it the more inexcusable in a medical man to be ignorant of it. We repeat it here, because we do not think, if he do his duty, that he will find it necessary to be scratching, or tickling the digestive surface of the stomach with silver or steel, or any other kind of filings, or asperities.

21. *Cure of Amenorrhœa and Fluor Albus.*—In the *Revue Médicale*, for July, are two papers on this subject. M. Th. Guibert, author of the first, after adverting to the means of restoring the menstrual flux in females of a sanguine temperament and plethoric habit, indicates the necessity of adopting remedies of a different nature in nervous and delicate subjects, and in a lymphatic temperament. He prefers, in the latter condition of things, the use of turpentine, as follows. ℞. Terebinth. venet. ʒij., sapon. hispan. ʒiij, pulv. glycyrrhiz. q. s. m. ut ft. massa. in pil. cx. dividend. Of these, the patient is to take ten pills daily, viz. five in the morning, and five in the evening. If a more active combination be required, he prescribes saffron and rue, in conjunction with the turpentine. ℞. Terebinth. venet. ʒij. Pulv. fol. croci. sativ. et rutæ. graveol. āā. ʒi. m. ft. massa in pil. lxii. divid.

Dr. Moulin is the author of the second paper. Its title, "Of the Diagnosis and Treatment of Amenorrhœa and Fluor Albus—Success in bleeding in these Diseases," at once indicates the remedy on which he places his main reliance. He premises some very judicious remarks on the necessity of a physician who lives in a large city, being constantly on the alert, when consulted for amenorrhœa, to distinguish truth from falsehood, and a patient truly interesting by her situation, from a vile creature, who wishes to hide a fault by the commission of a crime. In adverting to the extreme difficulty, not to say impossibility, of distinguishing, for the first two months, amenorrhœa from the cessation of the menses the consequence of pregnancy, M. Moulin takes occasion to notice the superior safety of blood-letting over the common emmenagogues, in cases where gestation has commenced. He adds, that if this state of things really exist, the blood, when cooled, will exhibit on the surface of the fibrine a whitish cloud, which becomes more and more evident as pregnancy is advanced, and is often changed, during the latter months of this period, into a pleuritic coat.

Our medical brethren in this country are too well prepared, both by general reasoning, and by their own experience of the frequent success of venesection, as well for the relief of the uterus in amenorrhœa, as for that of other organs brought into morbid association, to require of us any elaborate commentary on the benefits which will frequently result from the practice recommended by Dr. Moulin. For ourselves, influenced by our observation of the state of the functions generally in suppressed menstruation, and by the conviction of its being more generally the effect than cause of other diseases, we most commonly, if not universally, make venesection precede other remedies.

22. *Cure for Tænia.*—The following remedy for tænia, is recommended in the *Journ. der Prakt. Heilkunde.* ℞. Terebinth. venet. ʒi. Extract. hyoscyam. gr. iv. Calomel. gr. viii., m. ft. massa. Divide into two-grain pills, rolled in powder of liquorice root. Of these, four are to be taken every three hours; and, during the entire period, the patient is to use no nutriment but weak broth, or coffee, or tea. The dose will be increased or diminished, according to circumstances. If the worm be not expelled the first day, the pills may be continued for two or three days. In cases, of rare occurrence, in which the first trial is not successful, the medicine is to be resumed after the lapse of a few days. Instances of the entire success of this prescription in tænia, are furnished by German practitioners.

23. *Effects of Bi-chromate of Potass.*—Dr. Cumin, in the *Edinburgh Medical and Surgical Journal*, for October last, makes the following observations on this substance.

"Soon after I succeeded Dr. Brown, in the charge of the Lock Hospital,

(Glasgow,) I began to prescribe a saturated solution of bi-chromate of potass, as an application to tubercular elevations, excrescences, and warts. In these cases, the new growth has sometimes been removed by absorption, without any slough; but where a slough has formed, it has always served to expedite the cure, and in no instance have I observed it to be followed by a deep or unmanageable ulceration. In a case of warts, more extensive and formidable than any I had before met with, or seen delineated, which I treated last winter, the solution of bi-chromate was the only remedy which acted effectually, without causing such intolerable pain as to preclude the continuance of its application.

The bi-chromate of potass, although decidedly poisonous, does not appear to be very active in its operation. It inflames the stomach, both when introduced into that organ, and when injected in considerable quantity into the veins. Under these circumstances, it would require some degree of medical hardihood to venture on its employment as an internal remedy; but it is probable, that, if cautiously used, it may be found, like arsenic, to possess considerable tonic virtues."

24. *Hydrocyanic* (*Prussic*) *Acid in Chorea.*—In the Journal above quoted, is a detail of the successful treatment of two cases of Chorea, by JOHN STUART, Surgeon, of Kelso. The remedy chiefly relied on, after purging had been practised, was the hydrocyanic acid. The first patient, aged thirteen years, began the use of this medicine, October 27, 1826, in doses of four drops every two hours, and continued it until the 24th November; having, during one period of forty hours, taken ninety-six drops of the acid. On the 10th of December, the girl was described as being quite well, and as having become very fat and stout.

In the second case, of a girl aged thirteen years, the first dose of the acid made her very sick, and caused violent vomiting; but the succeeding doses only occasioned uneasiness of stomach and bowels, and head-ache. An increase of the dose to three drops was followed by violent retching, upon which the quantity was again reduced to two drops. Gamboge pills were directed, in alternation with the acid. On the 27th May, six weeks after the patient had been placed under the above treatment, she was declared to be convalescent. Mr. STUART particularly insists on the necessity of care being taken that the medicine is genuine. The best way to give it, is, he thinks, in simple distilled water, or, if it should be apt to excite nausea, in cinnamon or peppermint water; and, on account of its great liability to spontaneous decomposition, the mixture should never be made to last longer than twelve hours. This last advice is worthy of especial remembrance.

25. *Employment of Iodine, in the Treatment of Cynanche Parotidæa.* (*Rust's Magazin für die gesammte Heilkunde*, 1826.)—Dr. NEUMANN, of Neustadtel, in Silesia, has employed the hydriodate of potass with great success, as an external application in cynanche parotidæa, which prevailed epidemically in Neustadtel, in June, 1823. Among the poorer orders, who were treated in the ordinary way, the disease was very tedious, and generally ended in suppuration. Among the better ranks, the treatment consisted in the exhibition of an emetic, and the application over the tumour of a plaster composed of eight parts of mercurial ointment, and one part of the hydriodate of potass; and the ordinary effect was a radical cure, within three or four days. Dr. NEUMANN adds, that he never observed, in the cases so treated, any metastasis to other organs; and he is disposed to impute this to the formation of an erythematic eruption, which always appeared on the first or second day, and remained from eight to twelve days.

The author has annexed a very instructive case, illustrating the deleterious effects of this drug, when given in too great quantity. The irregularity of the heart's action thus induced, though it had lasted for a twelvemonth, was soon subdued by the employment of digitalis and cherry laurel water; and the tendency to faint, and anxiety, at the same time disappeared. The dropsy, however, continued much longer; but at length it slowly receded, under the use of the *Arnica*, combined with soap.—*Edinburgh Medical and Surgical Journal*, October. Query.—How far is the Iodine entitled to the credit of the above cases, to the exclusion of the mercurial ointment?

26. *Iodine, a cure for Chorea.*—In the September number of our contemporary, "The Philadelphia Monthly Journal of Medicine and Surgery," edited by N. R. SMITH, M. D., Professor of Surgery in the University of Maryland, there is a case of Chorea, recorded by Dr. PHILIP PELTZ, of this city, in the second stage of which he directed the employment of tincture of Iodine, with entire success. Dr. PELTZ gives some very judicious remarks on his view of the pathology of this disease; which, he conceives, may be divided into *acute* and *chronic*. Both stages, he thinks, consist in an alteration of the *tunica arachnoidea* of the brain and spinal marrow. In the acute, this membrane is actively influenced—in the chronic, it is thickened.

On being called to the patient, a female nine years of age, whose case he describes, he substituted for the stimulating practice, which had until then been pursued, the application of fifteen leeches to each temple, and the use of salts until free alvine evacuations had been procured. The leeches and salts were repeated every other day, and the pediluvium and sinapisms, every day, for about ten days. A blister was then put on the nape of the neck, and kept discharging for some time. Frictions of turpentine were recommended, and with some effect, along the course of the spine, and continued for a considerable period. Under this treatment there was some improvement.

"On the 9th June," (continues Dr. PELTZ—about three weeks after he began his treatment—) "supposing that the inflammation was almost or altogether subdued, and that there remained thickening of the tunica arachnoidea alone, I prescribed tincture of iodine, in doses of six drops, three times a day, to be given in a little sugar and water. The dose was gradually increased from this to twenty-four drops, three times a day. With this medicine my patient improved finely, and at length, completely recovered."

27. *Treatment of Cramp of the Stomach, caused by Tartar Emetic.*—Dr. DRAKE, in the September number of the Western Medical and Physical Journal, of which he is co-editor with Dr. WRIGHT, gives us some valuable observations on the pathology and treatment of cramp of the stomach, caused by tartar emetic. His distinction between the two stages of the disease, merits particular notice from the two contending parties, who are equally clamorous, the one for "stimulating out and out;" the other for "bleeding, bleeding;" not merely in this variety of gastric spasm, but in that caused by drinking cold water, and in certain spasmodic gastro-intestinal affections, such as colica pictonum, and bilious colic. The first stage of the malady under notice presents us with the phenomena of a dangerous spasmodic disease, involving the muscular functions of both organic and animal life, and connected with general exhaustion of the vital powers. It is to be treated with antispasmodics and stimulants, internal and external." Of these, Dr. DRAKE enumerates, 1. Spirit and water taken liberally. 2. Laudanum, taken in doses of fifty or sixty drops, at short intervals, until the disease abates. As a vehicle for the laudanum, nothing

is, he thinks, so good as the Spiritus Mindereri. 3. The volatile oils of mint, cinnamon, and peppermint, the tincture of lavender, ammoniated alcohol, and sulphuric ether. 4. Cathartic enemata; or, if diarrhœa be present, demulcent injections with laudanum. 5. Externally, the general warm bath; or, if this cannot be had recourse to, the feet and legs ought to be immersed in hot water, and hot fomentations made to the epigastrium, the *punctum saliens* of all the morbid affections. Hot and pungent sinapisms, or a piece of flannel moistened with the oil of turpentine, and applied to the same part, are still more powerful, and in desperate cases, should never be omitted. 6. Lastly, if a large quantity of the tartar emetic have been swallowed, vegetable infusions of whatever contains the tanno-gallic acid, as of hyson tea, Peruvian bark, oak bark, or the nutgall. At the same time, the throat should be titillated, so as to excite vomiting, and rid the stomach of the offending material. We would suggest, with all deference to Dr. D., the propriety of placing these two last measures at the head of the list, as the first to be had recourse to.

"The foregoing remedies will, in general, succeed: when they do not, the patient either dies from the impress of the medicine upon his nervous system, or gastritis supervenes. Many physicians, not aware of the facility with which inflammation succeeds to irritation, continue the stimulating treatment after the former condition has arisen, and do irreparable mischief." "The remedies for the Gastritis from tartar emetic are:—

1. Blood-letting. It should be, first, from the arm, and secondly, from the pit of the stomach; by leeches, if they can be had, or by cupping, if the parts be not too tender to bear that operation.

2. Total abstinence from solid food and all stimulating drinks and medicines; nothing being allowed, but mild and demulcent beverages, and those in small quantities.

3. Cathartic enemata.

4. Calomel in scruple or half scruple doses, every four or six hours, with opium, if much gastrodynia be present.

5. Finally, a large blister to the pit of the stomach; and others to the ankles, if the circulation of the extremities should be languid, and their temperature reduced. By a timely resort to these measures, the second or inflammatory stage of gastric cramp, may always be cured; while, treated on the stimulating plan, so well adapted to the first or spasmodic stage, it would as constantly prove fatal."

Except in this recommendation of the scruple and half scruple doses of calomel, we do not believe that any exception can be found against the propriety and philosophy of Dr. Drake's therapeutical course in cramp of the stomach. Calomel in such doses, not unfrequently produces vomiting and irritation of the stomach. Is it ever necessary in genuine gastric inflammation, if we have command, and make timely use of the other remedies? We believe the question ought to be often propounded by the physician to himself, before he makes use of calomel in any acute disease. For ourselves, we are not entirely prepared to give a definitive reply.

28. *On the Nature and Treatment of Colica Pictonum.* By Guerin de Mamers, M. D. P.—Such is the title of a very instructive paper in the *Annales de la Med. Physiol.* for August. The author sets out with announcing the following propositions: 1. Neither pain on the one hand, nor, on the other, acceleration of the pulse and augmented heat, are sufficient data on which to presume, in the first instance, a real disorder of the nervous system, and in the second, an unequivocal affection of the sanguiferous system. 2. Inflammation may exist even to a great extent, without any of the symptoms peculiar to a disorder of the blood-vessels, (such as heat, and

pulsation of the arteries.) 3. These symptoms may exist in all their intensity, without any true corresponding inflammation, and merely indicate at this time a state of simple congestion. 4. And even though these same signs should be associated with pain, there does not necessarily result a compound state of simultaneous disease of the nervous and circulatory systems, any more than when the disease has been ushered in by the above symptoms, and pain has supervened at a subsequent period. Things may be in such a state on this occasion as merely to indicate a simple nervous or sanguineous affection, joined only in one case with disordered innervation, on the other with disturbed circulatory movements.

In colica pictonum, then, continues our author, there may be phlegmasia, notwithstanding the absence of all the symptoms peculiar to an affection of the sanguiferous system; as likewise the union of all these symptoms may be insufficient to enable us to pronounce, with certainty, on the existence of a phlegmasia. We are to be guided more in our prognosis, by the length of time which has elapsed from the invasion of the malady, by the particular nature of the pains—their return by exacerbations, joined to their relief by pressure, cold, and special sedatives of the nervous system, or their exasperation by these same methods, and their continuance. He considers colica pictonum as an affection essentially *nervous:* in the commencement it presents no other character, but if not arrested in its course, the irritation, which at first only affected the nervous system, is soon propagated to the sanguiferous, and then the disease can no longer be considered nor treated as at first, that is, as purely nervous. The capillaries distributed to the affected part, have undergone, both in their organic conditions, and their vitality, a marked and profound modification, and the disease has now assumed all the characters of a true phlegmasia; that is to say, a morbid condition, the last element of which (sanguineous irritation) may be more or less evident, but which has not the less a positive existence, diagnostic symptoms, and peculiar therapeutical treatment. On this distinction rests the secret of the successful management of the disease in question, and by it we can explain the successful or unsuccessful manner of treating it. Up to the present time, our best observers have neglected to indicate with precision the epoch in which the irritation of the sanguineous capillaries of the digestive mucous surface is associated with the irritation of the nerves distributed to this tissue, or to the muscular coat; in other words, to indicate the time when gastro-enteritis supervenes on *colic*, and the depression gives way to the tumefaction of the abdomen, and slowness to frequency of the pulse. Dr. Guerin de Mamers concludes his essay by a critical examination of the treatment of colica pictonum pursued at the Hospital de la Charité, in Paris, and by Dr. Ranque, of the Hotel Dieu, in Orleans. This disease is, he contends, an affection essentially of the same nature, and consequently to be treated, not indeed always by the same means, but agreeably to the same principles. The varieties to be met with in the different cases are relative not any specific difference in its nature, but to the different stages in which it is observed and treated.

Our readers cannot fail to be struck with the general coincidence of views, between Dr. Drake, when describing the effects of over doses of tartar emetic, and the treatment demanded for their relief, and Dr. Guerin de Mamers, in his account of the disease produced by lead and the therapeutical indications for its cure. Philosophy and experimental observation here go hand in hand, and invite the physician to be their expounder and historian.

29. *Colica Pictonum, treated by Dr. Ranque, Physician to the Hotel Dieu at Orleans.*—Between the years 1820 and 1826, Dr. Ranque has treat-

ed 147 cases of colica pictonum in the above hospital, without the loss of a single patient. He does not propose his method for those cases in which there are symptoms of inflammation in the abdomen. This inflammation he considers as quite a supervention, and in no way essentially connected with true colica pictonum, which is an affection of the nervous system, quite independent of phlogosis. When abdominal inflammatory symptoms appear, the disease is to be treated by leeching alone, and the treatment of the colica pictonum is to be for the time suspended.

In the uncomplicated cases of this disease, our author has invariably succeeded by the *methodus medendi* now to be described. This method consists in a plaster over the abdomen, another over the loins, glysters, and a certain potion internally. The plaster for the abdomen is composed of, an ounce and a half of emplastrum galbani compositum, the same of emplastrum lyttæ—half an ounce of "theriaque"—one drachm of camphor, and half a drachm of sulphur. These are to be incorporated, secundem artem, and spread on a large piece of leather, which may cover the whole front of the abdomen. Previously to its application, however, the plaster is to be warmed, and a drachm and a half of tartar emetic, mixed with some camphor and sulphur, is to be spread over its surface. The plaster over the loins is to be made in the same way as that for the abdomen, with the exception of the tartar emetic, which is to be omitted. Those parts which are in pain, in any other region of the body, are to be rubbed with a liniment, into the composition of which the extract of belladonna enters pretty freely. A mixture is also taken internally, each dose of which contains twenty drops of the ethereal tincture of belladonna, (one ounce of the powdered leaves infused for three days in three ounces of sulphuric ether,) drinking plentifully of barley water, with or without gum arabic. The patient is to take no solid food whatever, and indeed as little of any kind of nourishment as possible. The lavement made use of by Dr. Ranque, is composed of a decoction of linseed, four ounces of oil, and twenty drops of the tincture of belladonna above described. The lavement and the potion are to be taken every day. On the third day, the abdominal plaster is removed—the lumbar one is allowed to remain on. If, however, the colicky pains should not have ceased by the third day, which they generally do, the abdominal plaster is to continue on some time longer. In such cases there will be a plentiful crop of antimonial pustules, and much cutaneous irritation, for which fomentations and poultices must be employed.

The cure required from two to twenty-five days. One hundred and twenty-nine were cured between the second and twelfth day—the remainder between the thirteenth and twenty-fifth day. In almost every case the vomitings ceased on the second day of the treatment. By the fifth day the abdominal pains ceased in the great majority of cases. On the sixth day the pains in the limbs ceased, and the constipation was overcome soon afterwards; which was the prelude to restoration of health.

The success which Dr. Ranque obtained by this method in colica pictonum, induced him to extend it to some other affections; viz., to chronic vomitings (of apyretic character)—to tetanus, (not traumatic)—to epilepsy, considered dependent on abdominal derangement—to puerperal mania, &c.; and in various cases he has been fortunate.—*Med. Chirurgical Review, October.*

30. *Acute Gastro-Cerebral Inflammation, accompanied by symptoms of Hydrophobia, Hydrocephalus, Cerebral Fever, Arachnitis, &c.*—Under this head, we find, in the *Annales de la Médicine Physiologique*, an account of the case of a child, five years of age, in whom, after the ordinary symptoms of gastro-enteritis had disappeared, under a suitable treatment, viz. leeches to the epigastrium, and antiphlogistic drinks, there supervened violent disease of the brain. Dr. RICHARD, who saw the patient after the coming on of the paroxysm, marked by symptoms of hydrophobia, found him senseless, lying on his belly, with his head turned to one side; his eyes closed, and rolled up, as it were, under the upper lids, but retaining their sensibility to light, and with pupils greatly dilated. The face was highly injected; skin of a burning heat; pulse contracted, hard, and frequent; the carotids beat with great force. The remedies prescribed to meet this state of things, were twelve leeches applied by the physicians (Drs. RICHARD and BOUGAREL) themselves, over the jugular veins, and sinapisms at the same time directed to the feet, and refrigerants to the head. Orders were left to allow the bites of the leeches to bleed freely. Six hours afterwards, the patient, when visited by his physicians, was nearly exanimate, in consequence of the hæmorrhage from the wounds produced by the leeches. This was arrested, and the patient stimulated externally by frictions with warm flannels, and the injection of some spoonfuls of light broth into the stomach; the legs were enveloped in mustard, and warm cloths frequently renewed were applied to the body. Re-action was gradually effected; the skin became warm; the pulse rose and acquired such frequency as to beat 125 times in a minute. All stimuli were then withheld, and mucilaginous and demulcent drinks substituted in their stead.

The second day was passed in alternations of calm and exacerbation; there were about four paroxysms, of very diminished violence, however, during these twenty-four hours; the pupil was still dilated, and the face pale. This state of things continued without much change, until the third or fourth day; when the pulse began to be diminished in frequency; sense was restored; the irritability to light was lessened, and the pupil recovered its wonted contraction; the appetite was good. On the 22nd of May, ten days from the attack, the convalescence was complete.

The editor of the *Annales* thinks, that it is very doubtful whether the child would have recovered without the copious loss of blood, which put his life in jeopardy. He notices the astonishing rapidity with which young subjects recover after excessive discharges of blood; but he very judiciously adds, this fact is not to countenance rashness; for similar hæmorrhages would be fatal in anemic subjects, as well as in those whose organs have been in a state of chronic inflammation before the supervening of the acute.

31. *Acute Rheumatism, Inflammation of the Spinal Marrow.*—The subject of disease, in this case, was a man, who, until the age of fifty, had always enjoyed good health; after which time he suffered under intermittent fever, followed for some months, by ischuria, the effect of stricture of the urethra. To this succeeded rheumatism in the back, neck, and shoulders, and finally a paralysis, which soon became general and ended in death. An examination of the body exhibited the muscles of the posterior part of the trunk of a dark red, gorged with blood, and easily torn; the spinal marrow and its membranes were inflamed from the fifth cervical to the eleventh dorsal vertebra.

MEDICAL JURISPRUDENCE.

32. *Account of the Medical Evidence in the case of Mrs. Smith, tried at Edinburgh, in February last, for Murder by Poison. With Notes and Commentaries.* By R. Christison, M. D. F. R. S. Ed. F. R. C. Physician and Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.

We regret very sincerely that our limits will not allow of our re-publishing the article headed as above, entire, from the April number of the Edinburgh Medical and Surgical Journal, the more especially as it will be a task of some difficulty to give an abbreviated history of the case; which is the more interesting to the general reader, as well as physician, on account of 'the striking coincidence among all the witnesses in regard to the chief points which came under their review.' The angry discussions among some of the medical witnesses after the trial are to be regretted. We have not seen any thing to change our belief of the utility of the present report.

Mary Smith, a farmer's wife, near Dundee, was indicted at Edinburgh on the 5th of February last, for administering poison to Margaret Warden, her servant. When the trial had proceeded for eight hours, and most of the crown witnesses, or those for the prosecution, had been examined, one of the jurymen was suddenly taken ill. He was removed from court, and committed to the charge of three of the medical gentlemen in attendance as witnesses. After these physicians had been examined touching the nature of the juror's malady, which was by them declared to be epilepsy, and how long he would probably be incapacitated from the performance of his duty, which they alleged might be for one hour, or for six hours, or more, the court found "that in respect of the evidence now delivered by the medical gentlemen, it would be contrary to justice and humanity to proceed with the trial that day," and postponed it accordingly.

On the 12th of February, the trial was resumed; but the proceedings were confined to an argument by the different counsel, as to whether it was legal to resume the trial under the circumstances. The court found that it was; and the prisoner was finally tried on the 19th, in presence of all the Justiciary Judges, viz. the Lord Justice Clerk, and Lords Gillies, Meadowbank, Alloway, Pitmilly, and Mackenzie. Twenty witnesses were examined for the crown, and sixteen more for the prisoner; and their examination, which was full of important evidence, lasted nearly fourteen hours. A short analysis of the moral evidence will be sufficient for the object of this narrative.

Evidence for the Crown.—The deceased was unmarried, twenty-five years of age, and three months gone with child—the prisoner's son being the father. She had an illegitimate child four years before. A short time before her death, she frequently spoke of her pregnancy to several of the farm servants; and Mrs. Smith too was aware of it, as she had herself discovered the intimacy between the girl and her son, and before the girl's death gave various people to understand she was acquainted with her state. After her death, however, when reports of her having died by poison were circulated through the country, the prisoner denied to every one that she ever had any such knowledge.

Drugs had been given by the prisoner on more occasions than one, and probably with the consent of the deceased to procure miscarriage. Though they occasionally quarrelled on the subject of the deceased's pregnancy, they were in general on good terms, and particularly so just before the fatal event.

Nineteen days before the girl's death, Mrs. Smith openly sent a message to a surgeon of her acquaintance at Dundee, for *poison* to kill rats; and on a Friday, twelve days afterwards, she as openly got it from him herself in a paper parcel, marked *arsenic, poison.* In her first declaration, twenty-four days after the girl's death, she denied this fact; but afterwards, in her second declaration, admitted it. The servants had not complained of rats since the preceding May; they had not, even the girl who had charge of the prisoner's grand-children, been told that poison was laid—nor was any thing of the kind seen in the loft before the deceased's death, or till after the prisoner's commitment, when oatmeal was found sprinkled in the holes of the walls.

On the evening of the Tuesday, after the poison was procured, and while Margaret Warden was sitting in the kitchen with a fellow-servant, Jean Norrie, preparing to go to bed, the prisoner entered with a wine-glass nearly full of a "thick white mixed stuff." After remarking that she had been taking her own share of it, she gave Norrie a little of it to taste in a tea-spoon; and then, without any further observation, presented the glass to Margaret Warden, who, likewise, without saying any thing, swallowed the whole contents. This draught, the prisoner afterwards told several people, was castor oil. Another draught was administered by her on Thursday morning, which she also afterwards said was castor oil; but there was no other evidence as to its nature.

During her illness, the deceased several times dropped strong hints to her companion, Norrie, of her belief that their mistress had given her injurious drinks; and on the morning preceding her death, when she knew her danger, she repeated these hints more strongly, in the presence of Norrie, another servant, and her own mother; and finally, on being questioned by her mother when alone with her, she declared Mrs. Smith was the person who gave her what made her ill. Various other circumstances militated against the prisoner, such as her agitation and contradictions during her examination.

Evidence for the Prisoner.—The fact that rats had been common about the farm-steading was proved. A boy, whose name and residence was not learned, had tried to purchase arsenic in the neighbourhood not long before Margaret Warden's death. But the most important circumstances in the prisoner's favour were, that the deceased had lamented to various people her state of discomfort, on account of her inability to work, and her reluctance to go to her mother's, who had refused, she said, to admit her into her house; and that, not long before her death, she repeatedly declared, in a serious manner, to several persons, her resolution to destroy herself.

But the alleged conduct of the mother was disproved by direct evidence. No poison was found about the deceased's bed; none could be traced into her possession, even presumptively; and, throughout her whole illness, nothing occurred in her behaviour to lead those around her to form the slightest suspicion that she had poisoned herself.

The *medical evidence* in the case, embraced two very different questions. "First, the soundness of the prisoner's mind, when she underwent her examination, and prevaricated so much; and secondly, the cause of Margaret Warden's death, whether she died of poison? whether she took poison on Tuesday? whether what she took on Tuesday was the fatal dose? whether the poison she took was the same with that procured a few days before, by the prisoner?"

As regards the first question, or *that relating to the prisoner's state of mind, when her declarations were taken,* there was some discrepancy of opinion. She had been, it seems, subject to hysteric attacks, with one of which she was seized in the night prior to her examination. Mr. Alexan-

DER, surgeon, of Dundee, who had been in the practice of attending Mr. Smith's family for five or six years, and who was sent for on this occasion, about one o'clock in the morning, (Monday) and left her at five, did not think that at that time she was fit to be examined as a person accused of crime. He saw her again on Monday evening, in jail, and she was not even then thoroughly collected, and had but an indistinct recollection of what had transpired during his first visit. The reason assigned by her relations for the attack on Saturday, was a great fright that day, in consequence of one of her grand-children being nearly drowned. Dr. JOHNSTON, physician, in Dundee, was requested by the sheriff-substitute of that town, to go to Denside, the residence of Mrs. Smith, and ascertain whether she would be able to go to Four Mile House, about a mile distant from her own house. He found her in bed, not, certainly, in robust health, but presenting nothing to prevent her making the required journey, or her being examined. She answered correctly to all the questions put to her by the doctor, and accompanied him and her husband and one of her sons, in a carriage, to the Four Mile House, where she underwent her examination. Her appearance did not seem to him to be altered, afterwards, when she came out into the room where the doctor was. This was the same day on which the prisoner's state of health was deposed to by Mr. ALEXANDER.

Notwithstanding the objection of the counsel for the prisoner, Mr. Jeffrey, to the admissibility of the declarations, the court found that they were admissible; for, in addition to the testimony of Dr. JOHNSTON, the sheriff-substitute of Dundee, and the county magistrate of Forfar, who were present and took the prisoner's declaration, deposed to her being quite collected, until she answered a question near the close, and then she became agitated, gasped, and fell back; but immediately after recovered her self-possession, and said that nothing ailed her.

PART II.—*Evidence with regard to the cause of death, and the several questions connected with the administration and effects of arsenic.*—It seems that no medical man saw the deceased, Margaret Warden, until she was almost moribund; and of course the account of the symptoms must be imperfect, gleaned as it is from the testimony of her fellow servants. Of the wine-glass-ful of a thick white mixture, which the deceased took on Tuesday evening, Norrie, her comrade, declared that she had tasted a little of it in a tea-spoon, and swallowed it; that it did not taste like castor oil, nor was it acrid; that she never suffered any harm from what she took. She slept with the deceased, and never awoke during the night.

"On the morning of Wednesday, between five and six, Margaret Warden told her comrade, Norrie, that she had not been so well as usual through the night; and not long afterwards, while sitting, striking a light, she became suddenly sick and appeared about to fall from her chair; upon which Norrie led her to bed. During the rest of the day, she was repeatedly visited at various times by Norrie and two other servants. None of them saw her vomit, or observed any marks of her having vomited; and although she was evidently unwell, and complained to Norrie of pain in the bowels, she said to another servant, about mid-day, that she was better; did not complain to her of pain, and actually took for dinner, and retained on her stomach, a pint of milk and a flour cake, as big as a soup plate. I must add, however, that the prisoner in her declarations, said the deceased had vomiting and purging on Wednesday; and that according to Dr. TAYLOR, one of the medical witnesses, the deceased told him she had these symptoms both on Tuesday and Wednesday.

No evidence was procured as to her state from six on Wednesday evenning till Thursday forenoon, except that when Norrie awoke once during the night, she found the deceased awake also. It was on Thursday that

she got the second draught from her mistress. On the forenoon of that day, she was much worse, had excessive thirst, vomited a great deal, particularly when she drank any thing, purged frequently, and complained of severe burning pain in her whole bowels, but particularly in the side. These symptoms continued unremittingly, till her death, which took place next day, (Friday,) at nine in the evening; and, on the morning of that day, when she was seen by Dr. TAYLOR, she had also excessive prostration, occasional stupor, cold extremities, clammy perspiration, and a pulse imperceptible at the wrist and temple, and felt near the heart beating faintly 150 times in a minute. She never complained of sore throat, or of any urinary affection.

The body was buried on the 10th September, two days after her death; but it was disinterred and examined twenty days after that, in consequence of the reports raised against the prisoner.

Before speaking of the evidence of the medical gentlemen, it must be premised, that "the witnesses, although allowed to be present at one another's examinations while the medical facts of the case were stated, were ordered to withdraw during the delivery of each other's opinions."

Dr. TAYLOR, *Physician and Surgeon at Broughty Ferry*, on examination, deposed to his having been sent for to visit Margaret Warden on Friday, the 8th September last: he saw her at one in the forenoon of that day; after some conversation with Mrs. Smith, he entered the kitchen just as the patient "was at the close of a fit of vomiting, after which she lay down exhausted with the effort: her countenance was sunken and ghastly." Other symptoms as above-mentioned. On his twice putting the question, when she was taken ill, she replied that it was on Tuesday night, with vomiting, purging, and pain in the bowels, particularly in the side; and, in answer to the question, when she had been in a particular way, she said, not for three months. There was evident fulness in the lower part of the belly. Her mother was at the bed-side all the time he was there. He declined giving the girl any medicine; and, in reply to a question of Mrs. Smith's, said he made it a practice not to give medicine to one he conceived dying. Mrs. Smith asked, as she had done during her conversation with the doctor before he saw the patient, whether he thought the violent vomiting and purging would carry off the child; adding that "she would not care though it did, for if the gudeman kent it, he would be like to tear down the house about them." The arms of the girl were more livid than natural.

On being cross-examined by Mr. Jeffrey, Dr. TAYLOR stated it as his impression that Margaret Warden had, when he saw her, cholera, the symptoms being analogous, and the disease being very prevalent in the country at that time. He had no idea that the deceased was ill of the effects of poison. In reply to a question of the Lord Advocate, he said that the cholera in his part of the country never proved fatal sooner than fourteen days. From the symptoms, the examination of the body, and the analysis of the contents of the stomach, he has no doubt that Margaret Warden died of poison, and that the poison was arsenic. A report to this effect was drawn up by Drs. TAYLOR, RAMSAY, and JOHNSTON.

In this report it was stated, that the body was disinterred and examined on the 30th September, (twenty-two days after death,) in the church-yard of Murroes; that there were marks of considerable putrefaction, externally, but that the stomach and bowels were in a state of "wonderful preservation." The stomach, externally, was every where painted with red vessels, bright red in most parts, dark red in other parts. The omentum was in the same state, especially at its base. The small intestines were likewise reddish, in many parts contracted in diameter and corrugated; and the mesentery at these parts was inflamed. The inner coat of the stomach

"was raised up, in many parts separated from the adjoining coats, in others corrugated or abraded in irregular circumscribed patches, with a raised mark, formed by the other coats. The inner surface seemed as if it had been seared with a hot iron, the coats being drawn together in a very singular manner. In one part there were large patches of a coal-black colour, confined entirely to the villous coat." There were no such marks in the small intestines; the inner membrane of which, however, bore otherwise the same appearance as the stomach.

The stomach contained ten or twelve ounces of a thick fluid, with yellowish particles floating in it. Similar particles were adhering to the villous coat, and at some parts were deeply imbedded in its substance. At these places, the membrane, except in colour, looked like a fine texture, corroded by lunar caustic, and round one spot there was a bright areola. Besides the yellow particles, a white powder was scattered over the whole stomach and intestines. There was a three months' fœtus in the passages, and half expelled from the vulva. The other viscera in the chest and abdomen were sound.

The report then concludes with observing, that the stomach, intestines, and their contents were removed for analysis; that arsenic was detected in various parts of the alimentary canal, but particularly in the yellow particles found in the stomach; and that the results of the inspection and analysis led the reporters to infer, that the deceased had died of poisoning with arsenic.

Additional particulars of this inspection are given in the evidence of Dr. Johnston, Physician and Surgeon at Dundee, already mentioned. The coffin was raised in his presence, and in company with Drs. Ramsay and Taylor. They "examined the bowels of the chest and belly on the spot; the rest of the examination could not be conducted in the burying ground." The stomach and intestines were therefore removed; the former having been previously tied at each end and put into a bladder, the intestines were put into another bladder, and some of the contents of the stomach which had escaped were put into a bottle. "The morbid parts were deposited," says Dr. Taylor, "in my house about dusk; were placed in my consulting room, of which I carried away the key when I was obliged to go out; and were afterwards taken along with me to my bed-room when I went to bed." They had been previously sealed up in a wooden box by Dr. Ramsay with his own seal. The seal was not broken till Sunday, when he and Dr. Taylor were present. The different articles were then taken out, and the half of each separated and tied up in bladders, or sealed in bottles, for the purpose of being sent to Edinburgh. They were all put in an earthen jar, with a metal lid, which was tied over and sealed with Dr. Ramsay's seal. Dr. J. accompanied the person who took them to the mail-coach office, and saw them lodged.

"Our experiments," continues Dr. Johnston, "were made with the other half of the articles. I tried various tests on the contents of the stomach and intestines. The result was the most perfect conviction that arsenic was in the stomach and bowels; and that it was sufficient to account for death."

On being cross examined by Mr. Jeffrey, the lord Justice Clerk, and the lord Advocate, Dr. Johnston stated that he had never before seen a case of poisoning with arsenic; that this was the first course of experiments he ever made on the contents of the stomach in such a case. The tests first applied were *liquid tests*, which are directed to ascertain the presence of arsenic, by the appearance of certain precipitates. These tests were 1. nitrate of silver, ammonia being previously added to the suspected fluid; 2. sulphate of copper; 3. ammoniuret of copper; 4. nitrate of silver, super-

carbonate of potass being previously added to the suspected liquor; 5. sulphuret of potass; 6. lime water.*

Other tests were then applied; for the liquid ones were not, says Dr. JOHNSTON, considered as absolutely conclusive, though they conveyed a very strong conviction. The reduction of the suspected matter to the original metal was then tried: a portion of the suspected matter was mixed with black flux in a tube, and by heat they procured that crust which is considered characteristic of metallic arsenic. Another experiment was the passing of sulphuretted hydrogen gas through the solution of the contents; a yellow precipitate was formed, which was afterwards decomposed with black flux and another crust was procured characteristic of metallic arsenic.

The test of reduction was tried before the report was made out. The quantity of crust was so small, that Dr. JOHNSTON says he could not scrape it with a knife from the tube: "there was not a grain, perhaps not a twentieth of a grain."

Dr. JOHNSTON made a similar set of experiments with pure arsenic, which he got from Mr. Russell, (*from whose shop the prisoner procured arsenic,*) and the results were analogous. The colours of some of the precipitates were slightly different, which was presumed to arise from animal matter being present in the matter he and his colleagues operated with.

Dr. RAMSAY confirmed the testimony of the last witness; and added that, in consequence of his being taken ill, he was prevented from attending the reduction experiments of Drs. JOHNSTON and TAYLOR. But he afterwards repeated them on a portion of matter which had been kept for him, and obtained a crust by the black flux. He carried this crust to Edinburgh, where it was shown to Dr. CHRISTISON, who proposed its being subjected to a farther test, the conversion of the metal into the oxide. Heat was applied to the fragments of the glass on which the crust was, after they had been put into a glass tube; and crystals of oxide of arsenic were procured. The matter reduced by Dr. RAMSAY was the sulphuret made by a stream of sulphuretted hydrogen sent through the solution of the suspected particles. He had no doubt of arsenic having been the cause of the death of the deceased. The symptoms were such as it produces, as were also the morbid appearances.

On being cross examined by Mr. Jeffrey, the lord Justice Clerk, lord Meadowbank, and the lord Advocate, Dr. RAMSAY admitted that the above were the first experiments he had made on arsenic, but added his having made many since; the quantity produced in the metallic state was very small, probably not more than the twentieth part of a grain; the crystals formed by Dr. CHRISTISON were probably less; his information as to the tests for arsenic is chiefly drawn from books. He did not consider the length of the girl's illness any objection to her having died of arsenic taken on Tuesday; though it is remarkable that there was no direct evidence of there having been symptoms on Wednesday so violent as those which generally follow the taking of arsenic, and that she was able on that day to eat a pint of milk and a flour cake for dinner. Death generally follows sooner;

* Though not forming a part of the evidence, we subjoin the account of the effect of the liquid reagents on the solution of sediment found in the stomach, furnished to Dr. Christison, by Dr. Ramsay. Ammoniacal nitrate of silver caused a bright yellow cloud; the sulphate of copper, a faint green; the ammoniacal sulphate of copper, a light olive green; the nitrate of silver, (carbonate of potass being previously added to the suspected fluid,) a deep yellowish-brown, passing to black; the sulphuret a very bright yellow; lime water, whitish; sulphuretted hydrogen, bright yellow, but rather faint.

but there have been many instances in which life was protracted as long; nor is the suspension of symptoms, though remarkable, unprecedented, and might be explained by the state of the stomach at the time the poison was taken; perhaps to the milk and cake. A person may swallow a great quantity of arsenic without bad effects, if it is vomited soon after; but a small portion may be left, sufficient to light up inflammation, and to prove fatal in two or three days. A very few grains, one or two, might prove fatal on an empty stomach. If a person in perfect health was suddenly seized with vomiting and purging, and arsenic was found in the body after death, Dr. RAMSAY would certainly attribute death to the arsenic.

Dr. CHRISTISON, Professor of Medical Jurisprudence, &c. confirmed the evidence of the preceding medical witnesses. He found, on examination of the various portions of the stomach and intestines sent to him, that "the cardiac end of the stomach exhibited several large, irregular black streaks and patches, produced by the extravasation of blood on its villous coat, and in its substance, and accompanied in one or two places with partial removal of that coat." A small portion of the stomach preserved apart in a pill box, had a little deep excavation, which was filled with a bright sulphur yellow powder.

The bottle contained three ounces of a thick brownish-red fluid, in which oxide of arsenic was detected. The particle imbedded in the ulcer of the stomach, also probably contained some sulphuret of arsenic, a minute quantity of which was likewise probably in the fluid.

The report drawn up by Dr. C., and which he read in evidence, concluded as follows: "As the papers sent to me do not mention any of the symptoms under which the person died, or the state of the dead body generally, a decided opinion on the cause of death can hardly be given. But the appearances in the stomach above mentioned, and the detection of oxide of arsenic in its contents, are quite adequate to account for death; and they satisfy me that oxide of arsenic had been introduced during life, that the person had in all probability lived longer than a day afterwards; and that it was hardly possible she could ever have recovered from the effects of the poison.

"As to the presence of the sulphuret of arsenic in the stomach, which I consider *probable*, this may have arisen either from the administration of orpiment, or of king's yellow, or from the action of antidotes on the oxide, or from the action of a gas sometimes disengaged in the alimentary canal during life, as well as after death."

All Dr. CHRISTISON's tests were on the principle of reduction; except that he once used the ammoniacal nitrate of silver as a trial-test; and this, too, yielded decided indications, so far as its indications could be decided.

On his cross examination by Mr. Jeffrey, Dr. C. admitted that some of the liquid tests employed by Drs. JOHNSTON, RAMSAY and TAYLOR, are not, singly, decisive of the presence of arsenic; but, taken conjunctly, they form satisfactory evidence. Some of them are not correct tests—the sulphate of copper is not a test for arsenic:—the nitrate of silver, with potass previously added to the suspected fluid, is not a very good test; neither is the sulphuret of potass. But the ammoniuret of copper, the nitrate of silver, with ammonia previously added to the suspected fluid, lime water, and sulphuretted hydrogen, are good tests; sulphuretted hydrogen is the best.

Dr. C. reproduced, at a rough guess, between a quarter of a grain and half a grain, by all his reductions. "This quantity, on account of the imperfection in the process of reduction, by which part of the arsenic is retained in the flux, indicates about twice as much arsenic in the contents sent to me." (Dr. C.)

The rest of Dr. C.'s evidence and opinions, drawn out by cross examina-

tion, ran chiefly on the quantity of arsenic which would, if swallowed, prove fatal, and the period in which such a dose would exert its baneful effects. The violent symptoms are not always evidenced immediately after the introduction of the poison into the stomach. ORFILA, in his *Toxicologie Generale*, mentions a case in which the poison was taken at eleven in the forenoon; the person ate a hearty dinner at two, and the violent symptoms did not display themselves until seven in the evening, eight hours after the poison was swallowed. Three days is not an uncommon length of time for a case of poisoning with arsenic to last. "People have lived eight days, or several weeks, months, and it is said, even years; and have died of the same poison after all. The common period is two or three days." The smallest fatal dose which Dr. C. has read of in books, was sixty grains. "On an empty stomach, probably a single grain, certainly two grains, would be unsafe; and I should think four grains might prove fatal. The stomach is not so easily trained to the taking of arsenic, as to the taking of opium."

The property of arsenic to preserve the animal solids from putrefaction, is believed on the continent of Europe. This poison has been detected in the body fourteen months after interment.*

"Arsenic," says Dr. C. "seldom causes death by inducing inflammation." It would have been more correct for him to have said that arsenic may destroy life without necessarily causing inflammation.

Medical Evidence for the Prisoner.—Dr. FYFE, *Lecturer on Chemistry*, was examined.—He did not think the liquid tests were by any means sufficient to determine the presence of arsenic; nor that Dr. CHRISTISON's explanation of the formation of the sulphuret of arsenic in the stomach is admissible. In 400 grains of arsenic sent him by Mr. Russell, an apothecary at Dundee, there was not any of the sulphuret: this latter is rarely contained in the white arsenic of the shops. He admitted, on being cross examined by the lord Advocate, that he was not aware of *any one substance which would exhibit the same appearances with all the fluid tests used by the Dundee gentlemen as arsenic would.* He thought the tests by reduction, mentioned in Dr. CHRISTISON's report, perfectly satisfactory.

Dr. MACKINTOSH, Lecturer on the Practice of Physic and of Midwifery, in his examination by Mr. Jeffrey, thought it hardly possible, recollecting the dinner which the deceased took on Wednesday, that arsenic could have been contained in the mixture taken on Tuesday. "The symptoms of cholera and poisoning with arsenic are the same—cholera is very common in this country, (Scotland,) after hot summers." The duration of the disease is various; Dr. M. has seen a person die of it in twelve hours in Scotland. He would not take upon himself to pronounce as to the existence of morbid appearances in ten days; much less after three weeks:—even in three days he thinks they are often doubtful. "The blackness observed on the body in this case forms no ground for inferring poison: it is very common as a consequence of diseases of the lungs particularly.

On being cross examined by the lord Advocate, Dr. MACKINTOSH said, "Assuming the fact of the detection of arsenic, and taking along with it the symptoms, it is my opinion the deceased died of poisoning with arsenic."

Dr. CHRISTISON, in commenting on that part of Dr. M.'s evidence relating to post mortem appearances, very properly reminds him of the difference between the loss of the distinctive characters of the tissues and organization produced by putrefaction, and the partial changes in structure, where the

* This assertion of Dr. Christison is not sustained by the opinion of Orfila, who thinks that the bodies of those dead from poisoning by arsenic are *cæteris paribus*, become as readily putrid as others.—*Ed.*

parts still retain their firmness and cohesion; and where of course the changes, whatever they may be, cannot be referred to putrefaction, or to the effects of death on the body.

The reporter of the trial has not favoured us with the *verdict* of the Jury.

VI. SURGERY.

33. *Aneurism—Ligature beyond the Tumour.*—By reference to our first Vol., p. 388, our readers will find a short history of this mode of operating for aneurism, and the details of a case from the Medico-Chirurgical Transactions, vol. 13, in which Mr. WARDROP successfully operated for an aneurism of the carotid artery, by securing this vessel above the tumour. This is the only successful case on record; and even this is denied by Mr. SHAW, (Lond. Med. and Phys. Journal for June,) who asserts that it was not an aneurism, but a mere dilatation of a portion of the vessel, often seen in old persons, at the arch of the aorta, &c., and which has no disposition to increase to a dangerous extent. Whether this be true, cannot yet be determined, but some other cases have since occurred of an extraordinary character, which are recorded in the Lancet, and extracted by the London Medical and Physical Journal, and the Medico-Chirurgical Review, with comments by Mr. SHAW and others. We regret that we cannot detail all the symptoms, that the diagnosis might be presented to our readers for their own decision. In No. 173 of the Lancet, is detailed a second case of Mr. WARDROP's, of a woman, E. B., æt. fifty-seven, who came under his care on the 2nd of December, with a pulsating tumour on the lower part of the right side of the neck, and suffering also from anasarca and various other indications of a diseased system.

Dec. 10. The carotid artery was "tied," (says the report,) by Mr. WARDROP, beyond the tumour.

Dec. 11. Pulsation in the tumour much reduced; pulsation of the opposite carotid increased in force.

A daily report is given, which is not very satisfactory, and on the 21st, the patient is reported in the Lancet as "quite comfortable." The London Medical and Physical Journal for *April*, says, "The patient died last week, and the body was examined on the 23d; (March?) when it was found that the *carotid artery was pervious and undisturbed, presenting one continuous tube throughout, there being no unusual appearance, and no aneurism. The heart was in a state of hypertrophy.* The Lancet, No. 188, attributes the death of the patient to taking cold and drinking spirits after the operation, giving rise to cough and fever, with increase of pulsation and size in the tumour. She died dropsical, with hypertrophy of the heart. A dilatation of the carotid artery at the situation of the tumour, was alone discoverable; this vessel remaining pervious.

The conclusion of Mr. SHAW, and of the Medico-Chirurgical Reviewer, that there was no aneurism, and that the artery was *not tied* by Mr. WARDROP, seems irresistible.

The next case was also a female, aged forty-nine, of an unhealthy appearance, with a pulsating tumour on the right side, immediately above the sternal end of the clavicle, of the size of a walnut, with all the characters of aneurism. It was complicated with symptoms of disease of the heart and large vessels. Mr. LAMBERT, her surgeon, regarded it as an aneurism of the right carotid at its origin; whether extending to the innominata or not, he could not determine. Sir ASTLEY COOPER discountenanced the operation; remarking, that "it was an aneurism by dilatation, which would not

increase." Mr. KEY, Mr. B. COOPER and Mr. CALLAWAY declared the operation inadmissible, regarding the innominata as diseased. Mr. WARDROP and Mr. WAKLEY recommended the operation: which was performed by Mr. LAMBERT on the first of March. The bulk of the tumour was immediately diminished, and its pulsation lessened. Next day, the vascular excitement was less than before the operation, and the patient observed, that "the beating of the heart was gone."

April 17. Patient's health has heretofore improved: on this day, uneasy sensations were experienced in the wound; next day, a hæmorrhage ensued; also on the 19th: and at intervals, until the 23d. *May* 1st, it returned with violence, and the patient died.

Dissection revealed a thick layer of fibrine in the pericardium, the result of pericarditis; lungs and heart healthy; arch of aorta slightly enlarged; innominata not enlarged, but, internally, its lining membrane had some patches of curdy matter. "At the root of the right common carotid (the situation of the original swelling) was a pyramidal tumour, about half an inch in breadth at the base, and extending two inches up the artery. Neither a probe, nor water, could be forced upwards from the innominata. On making a section of the tumour, its lower part was found accurately closed by a firm coagulum. The coats of the artery, round this coagulum, were about four times their natural thickness, and lined by a thin layer of fibrine." There was an ulcerated opening where the ligature was applied, communicating with the external wound: above the artery was completely pervious, so that water injected into the aorta, passed by means of the superior thyroid, &c. into the right carotid, and out of the external opening, satisfactorily accounting for the death of the patient.

Mr. LAMBERT has published a plate of the dissection in No. 194 of the Lancet; from which, as well as from the history of the case, the reviewer in the Medico-Chirurgical Review, asserts very positively that here also there was no aneurism, although there is no doubt the artery was tied. It is to be regretted that so much acrimony mingles with almost every criticism now issuing from the London medical press, that it is impossible for disinterested persons—for those that would be just, to rely on statements positively made. We cannot form an opinion on the present question. But whether these cases, including even the first one of Mr. WARDROP'S, be regarded as aneurisms or not, they, by no means, would discourage from the operation of a ligature *beyond* the tumour, under appropriate circumstances; the principle, as stated in our first volume, is defensible, and, we believe, correct: the circumstances to which it is applicable are very rare, but, we still believe that they do occur, and that the operation will, when judiciously resorted to, prove successful. We will detail another case of great interest on this subject from the same Review, for October, extracted from the Lancet; in which Mr. WARDROP, by no means deterred by former experience, has boldly applied the same principle to a reputed aneurism of the arteria innominata with apparent success.

Mrs. A., æt. forty-five, presented, on the right side of the neck, a pulsating tumour of the size of a turkey's egg; its base situated beneath the upper part of the sternum, and its apex rising on the inner side of the sterno-mastoid muscle. The pulsations were strong, and synchronous with those of the heart; it could not be entirely emptied by pressure, and the firmest compression diminished, but did not arrest the circulation through the subclavian. There was no pulsation in the *branches* of the right carotid; but the trunk pulsated very perceptibly, apparently from the impulse received from the tumour. The branches and trunk of the left carotid pulsated vigorously. Examination by percussion and the stethoscope, discovered a wheezing (bruit de soufflet) under and below the right clavicle. (Dr.

Barry, on examination with the instrument, was induced to believe, that from the wheezing, from the impulse synchronous with the pulse, from the "bruit de scie," the aorta at its arch and within the pericardium, was most probably dilated and pressed upon some of the bronchia.) The patient had at times great dyspnœa, increased on the slightest motion, almost to suffocation, and obliging her to use a high pillow: nights restless; sleep interrupted; aspect anxious, pale and sallow; emaciation; pulse frequent, full and throbbing. Eleven months previously, she became first ill, with dyspnœa, cough, and severe pains in the chest, head, and neck. Five months afterwards, the tumour was discovered, and has continued to increase, with an aggravation of all the other symptoms, notwithstanding a severe diet, frequent small bleedings, digitalis, &c. Mr. Wardrop, considering medical treatment as hopeless, and taking into account the apparent obliteration of the right carotid, secured the right subclavian artery with a ligature on the 6th day of July, 1827. The pulse at the wrist ceased immediately; and there was great relief to the breathing, and also to the head. The pulsation of the tumour was lessened; its size remained stationary; in twenty-four hours, a slight pulsation appeared at the wrist; the arm did not become numb or cold. The patient continued well; the ligature came away on the 22nd day; the tumour much diminished in size; patient has no pain in the head, cough, or dyspnœa; and she can ascend stairs with comparative ease. On the ninth day after the operation, a pulsation appeared in the right carotid artery. The patient had left the hospital in August, for the re-establishment of her health in the country. The final issue of this new and bold modification of the operation for aneurism, will be looked for with much interest by the profession, whether this be in reality a proper aneurism of the art innominata, or a mere dilatation of the vessel with enlargement of the aorta, as is surmised by the Medico-Chirurgical Reviewer. We hope Mr. Wardrop will soon give us his own account of his late operations.

34. *Dislocation of the Humerus.*—"Professor Smith, of New Haven, has recently effected the reduction of a dislocated humerus, *seven yearly months* after the occurrence of the injury. The patient was a young woman."—*Philad. Monthly Journal, Aug.*

35. *Dislocation of the Femur.*—Dr. Morris, of Ohio, has reduced a femur which had remained dislocated for three months.—*Ibid.*

In each of these cases, reduction was effected *without the use of pullies.* Moderate extension, assisted by a judicious management of the extremities of the bones dislocated, was sufficient.

The editor of the above work, Dr. N. R. Smith, makes some pertinent remarks on the management of dislocations, especially on the use and abuse of simple mechanical force. "We believe it will ultimately be admitted by all scientific surgeons, that force contributes infinitely less to the reduction of dislocated bones, than that kind of art which is founded on a correct and minute knowledge of the anatomy and mechanism of the joint, and on the dexterous employment of manual force."

In the October number of the same Journal, Professor Smith records a second example of a dislocation of the humerus, reduced ten and a half months after the displacement. Both of these dislocations of the humerus, occurred in the same patient, during puerperal convulsions. "The reduction was accomplished by gentle and long continued extension upon the member; the knee of the surgeon was then placed beneath the axilla, and, the bone being employed as a lever, the head was, without much difficulty, conveyed upwards into the glenoid cavity."

36. *Extirpation of an Ossified Septum of the Corpora Cavernosa Penis.*—Dr. M'Clellan has lately extirpated the septum of the cavernous portion of the penis, which was completely ossified, rendering micturition difficult, causing, during erection, an incurvation of the penis, with concavity upwards, and preventing all sexual intercourse.—*Philad. Monthly Journal, for Nov.*

37. *Aneurism by Anastomosis.*—Dr. M'Clellan, early in November, secured the right carotid artery, in a child, aged *seven months*, for an aneurism by anastomosis occupying almost entirely the right side of the face, partly closing the right eye, and overlapping the nose. The tumour became less tense, and more pale, and the pulsation on that side of the face entirely ceased.—*Ibid.*

38. *Mydriasis, Hemeralopia, &c.*—Our colleague, Dr. La Roche, who, as already intimated, is travelling in Europe, has effected an exchange of our Journal with the Ephemerides Médicales of Montpellier. The numbers of this year (1827) have been received, and contain several valuable articles, some of which are contributed by the distinguished professors of the ancient and venerable school of Montpellier; an institution, which, amidst all the rivalry of modern times, and, apparently, in a disadvantageous position, maintains its reputation for science, and keeps pace with the rapid improvements of the day. This fact is evinced by the Journals before us; and we shall henceforth inform our readers of the labours of the distinguished gentlemen of the Southern School of France.

In the February number of the above work, we observe a strong recommendation, by M. Serre, physician at Uzes, of caustics, in dilatation of the pupils of the eye, with more or less depravation of vision, provided there is no alteration of structure, but a mere læsion of function. It is well known, that such cases are tedious, and often intractable; but M. Serre asserts, from much experience, that caustics, particularly the lunar caustic, applied to the cornea, operate at once in effecting a contraction of the pupil, and that this contraction is permanent. This observation, he says, applies to those cases which are supposed to depend on irritations of distant organs, as from disorders of the stomach, intestinal worms, &c.; even where such irritations have not been subdued.

He recommends, for the advantageous employment of the lunar caustic, that it should be solid, and nicely pencilled: that it be applied to the cornea in preference to the sclerotica, as the former sympathizes more readily with the iris; that the eschar be made at the circumference of the cornea, as thus no immediate obstruction is made to vision, and as the effect of the remedy is more prompt; that the cauterizations be superficial, extending one or two lines, and repeated two or three times round the edges of the cornea; that the smarting should be considerable, and that it should be followed by a slight injection of the conjunctiva, which is almost a certain indication of success; and, finally, to maintain the irritation excited by the caustic, that the vapour of equal parts of the aquæ ammoniæ and ether, be applied to the eye. There is no danger from the caustic, the pain is tolerable, the inflammation trifling, and the superficial eschar falls at the end of forty-eight hours, very rarely remaining to the fourth day, and always leaving the cornea transparent.

Four cases are given: the *first* of a female child, æt. ten years, with hemeralopia for two months; could see a little during the day; after sun-set, was quite blind; supposed to depend on worms. The iris was dilated to a mere ring: a slight ulcer existed at the edge of the cornea of the right eye; which was touched with lunar caustic on the first of November, 1825. The next

day, the child stated that she saw better on the preceding evening: the iris was now contracted and sensible to light; the left pupil remaining dilated: the operation was performed on the left eye; there resulted *an immediate contraction of the pupil, and clear vision the same evening.* In two days after, the cornea throughout was completely transparent, and the patient perfectly well. A disposition to return was perceived at the end of a month; the cure was rendered permanent by the re-application of the caustic.

The *second case* was a soldier, aged forty years, also with hemeralopia; pupils dilated and immoveable. The caustic was applied three times, successively, on the 10th, 12th and 14th November; at the last operation, the vegetable caustic was used. The pupil immediately contracted, and became susceptible to light. The eschars separated on the 15th, the patient's vision being perfect.

In the *third case*, the disease existed only in the right eye, and appeared two months after a blow on the orbit. The pupil had a slight irregularity, was dilated and insensible to light; vision in this eye very imperfect. The lunar caustic was applied but once. Next day, pupil was greatly contracted, and eye painfully susceptible to light. On the sixth day, no mark of irritation, no eschar was susceptible; the patient has enjoyed since that period, (March, 1826,) vision with both eyes.

The *fourth case* was an individual liable to head-aches. On the 15th of August, 1826, the sight of the right eye was much impaired; pupil dilated and immoveable; the upper lid was also paralytic, falling over the eye. The lunar caustic was applied to four points in the circumference of the cornea; the pupil immediately contracted: the ammoniacal and ethereal vapours were directed, and in three days vision was restored, and the eye-lid had recovered its powers. The patient remained well.

39. *Fracture of the Humerus, by Muscular Contraction.*—M. Larrey and M. J. Cloquet, reported to the Section of Surgery, the case of a soldier, whose arm was fractured by muscular contraction, while wrestling with one of his comrades. M. Larrey has only seen one similar case; which occurred in a female, who, descending from a carriage, and perceiving the steps were breaking down, powerfully grasped one of the handles of the vehicle, and fractured the humerus, immediately above the insertion of the deltoid muscle.—*Arch. Général. Sep.*

40. *Lithotomy.*—Some comparative trials have lately been made, at the Hotel Dieu, by MM. Dupuytren, Sanson, and Breschet, on some of the various modes of operating for the stone. Of twenty-six calculous patients, the bilateral operation was performed by Dupuytren on twelve; the lateral operation, by Breschet, on eight; and the recto-vesical operation, by Sanson, on six. Of the twelve Dupuytren lost none; Breschet lost two of the eight; and Sanson one of the six.—*Jour. Univer. July.*

41. *New Mode of Dressing Ulcers.*—In the Journ. Général, for August, is published a paper, read before the Royal Academy of Medicine, by M. Reveille Pariset; in which the author recommends thin sheets of lead as a dressing for ulcers. "The advantages which this method possesses, appear incontestible; being fully tested by an experience of several years. Simplicity, quickness in applying the dressing, cleanliness, the rapid formation of a cicatrix, solid and never injured by accidental tearing, so common under ordinary dressings, the intervals of dressing being prolonged without inconvenience, the complete abandonment of all oily substances during the formation of the cicatrix, the certainty of avoiding one cause of hospital gangrene, and economy, so important in armies, &c., are some

of the results of this new method." To which may be added, the effect of moderate and uniform compression, by increasing, in some slight degree, the thickness of the leaves or sheets of lead. M. PARISET recommends this practice in all healing ulcers; in large superficial ulcers from burns it is very valuable; as also in the irritable ulcers from blisters, especially when frequent dressing is painful and injurious, in those often seen on the neck, and the tibia, ancles, tendo achillis, &c., in ulcers from erysipelas, and in those bad sores often observed in œdematous limbs, &c. &c. The cleanliness of this practice, compared with that embracing the use of lint, ointments, &c. is sufficient to recommend its adoption, particularly in hospital practice, even if its other reputed advantages should be found to be overrated.

42. *Excision of a Portion of the Humerus.*—In the Arch. Générales for August, is detailed the case of a child, three years old, long the subject of rickets, and which, in January 1827, had a "cold abscess" near the head of the left os humeri. The abscess was opened, (Feb. 14th,) part of the bone was found necrosed, and, protruding through the wound, could not be reduced. This portion was part of the body of the humerus, separated from its superior epiphysis. On the 8th of March, it was removed by means of a saw. From the restlessness of the child, the end of the bone protruded a second time, and was with difficulty reduced, and on a third recurrence of the accident, the surgeon, M. POMMERAIS, sawed off another portion of the bone, about one inch in length. The recovery, although retarded by a small exfoliation, was completed by the end of April, so that *all the motions of the arm are preserved:* the child can raise its arm to the head, and move it in every direction, as if the humerus had not been diseased. A slight shortening has ensued.

43. *Rupture of the Bladder.*—M. CLOQUET reported to the Royal Academy of Medicine, the case of a man, who, in wrestling, received a blow from the knee of his antagonist, immediately above the pubis. Severe pain ensued, with suppression of urine; the catheter brought away only a little bloody fluid. The patient survived to the 9th day, with all the symptoms of intense peritonitis. Dissection revealed a fissure at the fundus of the bladder, and the cavity of the peritoneum inflamed and filled with urine.—*Arch. Gen. July.*

44. *Empyema with Pneumo-Thorax.*—In the October number of the Edinburgh Medical and Surgical Journal, Dr. DUNCAN, jr. has reported a series of cases and dissections, illustrative of the nature and consequences of empyema. We have not room for an analysis of this paper, which evinces great attention to the various and obscure diagnostic marks of this affection, and the value, approaching to certainty, of auscultation and the stethoscope, in detecting the effusion of pus, air, &c. Some of these patients recovered by the operation of paracentesis thoracis; in some, dissection revealed great disease of the lungs, with the inflammatory affection of the pleura; in others, there were fistulous communications between the bronchia and pleura, by which air with pus, &c. was effused; while in many, the pleura seemed alone diseased; this membrane being covered with a thick layer of coagulable lymph, which lymph seemed to bind down the contracted lung, so as to prevent any subsequent dilatation. This lymph, Dr. D. believes, becomes organized, and secretes the purulent fluid, for this membrane completely covers the whole pleura. It appears also capable of ulceration. These remarks we believe correct, for we have, for some time past, doubted whether serous membranes ever secrete pus.

45. *Dangerous Hæmorrhage from Varicose Veins.*—In the Journ. Général for August, M. Gendrin has exemplified, by the detail of some interesting cases, the danger which occasionally results from the rupture of varicose veins; the hæmorrhage being often more profuse than other venous discharges, and sometimes proving fatal. This peculiarity he accounts for, by observing, that the blood, owing to the distension of the vessel, and the consequent inefficacy of the valves, flows readily from the upper portions of the vein, and hence from the iliac veins, vena cava, &c. Hence, he recommends such hæmorrhages to be treated, like arterial bleedings, by the tourniquet above the ruptured part of the vessel, and afterwards by regular compression.

46. *Amputation of the Neck of the Uterus.*—M. Lisfranc has performed this operation on twenty-two females; two of these have died; two are now convalescent. Of the two fatal cases, one individual had a return of the complaint at the expiration of three months; the other died twenty days after the operation: latent cancers, not detected during life, were found on the vertebral column and in the ovaries. Hence it appears, that eighteen individuals have been benefited by the operation, and two years have already elapsed since several of them submitted to the excision—*Journ. Général, August.*

47. *Osteo-Sarcoma of the Lower Jaw.*—From the Medico-Chirurgical Review, for October, we learn that a man aged sixty-one years, was brought into Bartholomew's Hospital, July 4th, with an osteo-sarcomatous tumour, involving the alveolar processes and part of the base of the lower jaw, from the incisor teeth to the first molar tooth. It consisted of two portions; one, occupying the situation of the gum, was a red, vascular excrescence, softish and moveable; the other, resting firmly on the bone, and identified with it, was white and cartilaginous. The teeth were quite loose. Mr. Lawrence advised the removal of a portion of the lower jaw with the tumour, to which the patient would not assent. Mr. L. then, on the 13th of July, having extracted the loose teeth, completely dissected away the vascular excrescence and its cartilaginous base, leaving a semicircular gap in the bone, extending nearly to its basis. The substance of the bone had been converted into a tumour, of a cartilaginous consistence, with numerous small bony spiculæ projecting into it.

July 19th. No bad symptoms; wound has a healthy character.

August 10th. The wound has healed, and the parts lately occupied by the tumour were perfectly healthy.

It will be interesting to know the sequel of this case; and to determine, if possible, how far a similar operation could be substituted for the horrible resource of amputation of the jaw, now so frequently resorted to.

48. *Strictures of the Rectum.*—Mr. C. Bell, in his late lectures at the College of Surgeons, (Lancet, Nos. 205—6.) has divided strictures of the rectum into *four varieties.* The *first*, is the contraction of the integuments around the anus, similar to that observed around the mouth. The integuments lose their elasticity, become firm, and so thickened, that a probe can hardly be introduced without great suffering. In this variety only, is the *knife* to be employed. The *second* variety is consequent on piles. Distension of the hemorrhoidal vessels produces inflammation, followed by effusion of lymph, loss of elasticity, and contraction. The *third* species, is a scirrhus, taking place at the margin of the inner sphincter, and occasioned by habitual constipation, where a fold of the gut is forced through the sphincter by great straining. The *fourth* kind, is a cancerous disease, often

confounded with the third variety, beginning in the glandular texture of the part, and resembles the scirrhous contraction of the pharynx. It is aggravated by injudicious interference. Obstruction to the fæces may also arise from "a bagginess within the rectum," and also by a sudden turning or twisting of the rectum, caused by constipation or straining.

Mr. BELL advises regulation of the bowels, so that one copious evacuation be daily procured, especially by glysters: a linseed enema at night is useful, and, in some cases, bougies; but these require great care, as they are very often injurious, aggravating the disease, and giving rise to peritoneal inflammation and *death.—Medico-Chirurgical Review, October*, 1827.

49. *Peculiar Disease of the Lower Jaw.*—In July last, Dr. CHAMBERS, proprietor of the celebrated remedy for intemperance, died in New-York. His disease was a peculiar affection of the lower jaw, on the right side, causing intense pain, delirium, and, eventually, death; with little or no fever, swelling, soreness, or other inflammatory symptoms. On a *post mortem* examination, the lower jaw on the right side was found dead, and denuded of its periosteum, from the root of the coronoid process to the posterior bicuspid tooth. There were some purulent effusions, and the adjacent parts were greatly diseased, particularly the masseter muscle. The fluids were so acrid, as to act on the instruments like an acid. The record of this case, is made by Dr. JOHN AUGUSTINE SMITH, Professor of Anatomy in the University of the State of New-York.—*New York Med. and Phys. Journ. No.* 23.

50. *Urethro-tome.*—In the October No. of the London Med. and Phys. Jour. is a communication from a Mr. Stafford, *dated Aug.* 13, 1827, recommending a stilette with a lancet point, and concealed in a catheter, for the division of old strictures—a practice instituted some thirty years since in this city, by Dr. PHYSICK, and which has long been acted on here, and in France and Germany, under various modifications. The great objection is the danger of making a false passage, especially in the hands of the inexperienced: to obviate this objection, a very ingenious contrivance has been suggested by a student of medicine in this city, Mr. CHEW; a drawing and description of which we hope to present in our next number.

51. *Moxa.*—In the same number of the London Jour. Mr. BOYLE records three cases of disease treated with the moxa. The first was a peculiar affection of the leg, (apparently a neuralgia,) of two years' standing, which had resisted every variety of treatment, internal and external, including blisters, caustics, and incisions. It was successfully managed by two applications of the moxa; the first affording immediate relief to the severe pain, &c.

The 2nd and 3d cases were contracted knee joints, one of five years', the other of sixteen years' duration. They were successfully treated with the moxa, assisted, however, by mechanical contrivances, for the gradual extension of the limbs.

52. *Puncture of the Bladder above the Pubis.*—(Medico-Chirurg. Rev. Oct.) J. Dainton, æt. 48, was admitted into Bartholomew's Hospital, June 21, not having passed any urine since the 17th inst. in consequence of a strictured urethra. He was copiously bled and purged, and frequently put into a warm bath, with partial advantage, small portions of urine passing per urethram. Symptoms of distension of the bladder, with pain and uneasiness, however, increasing, and the viscus *apparently* extending above the umbilicus, Mr. LAWRENCE punctured it with a

trocar. Only a pint of high-coloured urine escaped: a catheter was introduced through the wound: great relief was afforded: small quantities of urine were discharged through the urethra, and none through the catheter, which was therefore withdrawn on the 25th. On the 26th, the bladder was again punctured above the pubis; *no urine followed:* on the 27th, a small stream of urine came per urethram; after which the patient continued to improve under the antiphlogistic treatment. July 16, left the hospital: stricture in urethra remaining.

53. *Empyema.*—In the Aug. No. of the Med. Repos. a case of empyema in the left side of the thorax is related; resulting, in the course of 7 or 8 months, from repeated pulmonary affections. The difficulty of breathing, evidence of the effusion, appeared to be mistaken by the surgeon as indicative of inflammatory congestion; as he speaks of bleeding being indispensable when the patient had no fever, when the pulse was quick and undulating, and the system in a leuco-phlegmatic condition. A painful elevation under the left mamma appeared before death, in which fluctuation was perceptible: "*a lancet was introduced, but no matter escaped.*"!!

Dissection manifested that the pleura contained twenty-seven pints of fœtid cream-like pus, besides several pounds that had accidentally escaped during the examination. The heart was completely pushed into the right side of the chest; no part of it being on the left of the median line: the diaphragm on the left side formed a projecting tumour in the abdomen, pushing the stomach and liver as low as the umbilicus. The lung appeared to be nearly destroyed; there was merely a condensed substance at its root, where the branching off of the pulmonary artery took place. It was evident, that the tumour under the mamma resulted from the purulent effusion in the thorax, as an instrument passed into the opening made before death, gave vent to a large quantity of matter. The case occurred at a military hospital.

We condense the record given, to show what derangements vital organs will occasionally tolerate almost with impunity; what imperfection attended the diagnosis, and of course, how improper the treatment, from mere inattention to, or ignorance of the common signs of empyema, but especially, of the proper use of the stethoscope, by which the disease might have been timely detected, and paracentesis thoracis resorted to with a prospect of success. Vide former Nos. of this Journal, article Empyema.

54. *Phlebitis.*—In the Oct. No. of the Medico-Chirurg. Rev. are recorded three cases of inflammation of veins, consequent on venesection, in which suppuration from the internal lining membrane ensued: pus was also found in the cellular tissue surrounding the vessels. In one, the basilic vein, from the elbow to the axilla, was found filled with pus: the axillary vein was occupied by a coagulum, not adhering very intimately to the coats: the internal surface of the basilic vein was thickened, and had a rough appearance. In the other two, portions of the vein were obliterated, and abscesses were formed in other parts: death in all seemed to be induced by the severe inflammatory fever, and by inflammations of internal serous membranes succeeding the inflammation of the vein. Dr. Physick's practice of employing blisters, which in this country has been very beneficial, was not adopted by the surgeon. It is recommended, however, by the reviewer.

55. *Spasmodic Strictures.*—M. Dupuytren has lately recommended, that when, in strictures of the urethra, the passage of the bougie is ar-

rested by a spasmodic or vital contraction of the canal, &c. the point of the instrument should be pressed moderately, but steadily, on the strictured portion. In this way the contraction often yields, and the instrument will penetrate to the bladder. This practice, termed by DUPUYTREN *dilatation vitale*, as distinguished from mere mechanical distension, has been long practised in this country with marked advantage. From the May No. of the Ephemerides Med. de Montpellier, we learn, that in similar cases, professor LALLEMAND has obtained a success as astonishing as favourable, by pushing down on the stricture a paste composed of the acetate of morphine, (half a grain to one grain,) incorporated with fat. It is applied by means of a canula, the paste being forced down upon the stricture by means of a stilette acting as a piston.

VII. MIDWIFERY.

56. *The Cæsarian Operation, successfully performed twice on the same Individual.*—A female, aged thirty-six years, after the birth of her sixth child, suffered from a disease of her bones, so that the two ischia were separated only the width of two fingers. Becoming pregnant, the cæsarian operation was performed; the child was removed in a state of asphyxia, but soon revived. The mother recovered after some dangerous inflammatory symptoms. The lochiæ appeared per vaginam. "Notwithstanding the injunctions of Dr. SCHENK, (her surgeon,) this female became pregnant the eighth time, in December, 1824, and a second cæsarian operation was performed with the same success."—*Arch. Générales, Aug. from Siebold's Jour.*, 1826.

57. *Vomiting in Pregnancy.*—M. DANCE, from many facts, is induced to believe, that the obstinate vomiting which often continues beyond the ordinary period in pregnancy, indicates actual inflammation in the uterus, and in the membrana decidua. These protracted vomitings should therefore be attacked by decided antiphlogistic remedies, directed to the uterus, and not to the stomach, which is only sympathetically disturbed. There is no danger of thus exciting an abortion.—*Journ. Univer., Aug.*

58. *Hysterotomy per Vaginam.*—In the *Annali Univ. di Med. Milano*, Sept., 1827, DR. SOLERA, relates the case of a female, æt. thirty-eight, of a good constitution, seized with labour pains, at the full period of utero-gestation, on the 2nd day of May, 1825. On examination, no trace of the os uteri could be discovered; it was completely *obliterated*. Careful and repeated observation confirmed this idea, and proved, that no obliquity of the uterus existed, and that the head of the fœtus could not be felt above the superor strait. The patient was seen by Drs. BALLARDI, VILLANI, CRISTOFORI, FORTUORI, and OTTONI; and all recommended the section of the uterus from the vagina, in preference to the usual cæsarian operation. (Gastro-hysterotomy.) The operation was performed on the 4th of May, at 3 P. M., by successive careful incisions with a bistoury, from the vagina, so as to open the cavity of the membranes without injuring the infant. This being accomplished, and the head of the fœtus being forced down by the pains, the case was left to nature. The pains not being sufficiently powerful, the child was delivered artificially, on the morning of the 5th. It was dead. The mother recovered. The artificial opening, which at first was rather on the right side, was found, thirty days after delivery, nearly in the axis of the cervix uteri.—*Journ. des Progrés. Vol. 5th.*

59. *Premature Labour.*—In Vol. III. p. 408, of this Journal, is reported a case of labour artificially excited, and terminating favourably for mother and child. It occurred in the hospital at Pavia, under the care of Professor BONGIOVANNI. From the Ephemerides de Montpellier, for Sept., 1827, we learn, that another case has occurred at the same hospital, of a ricketty female, aged thirty-five years, supposed to be seven months advanced in pregnancy: the antero-posterior diameter of the pelvis being reduced to two and a half inches. An ineffectual attempt was made to induce labour by the exhibition of ergot; the membranes were then punctured with a trocar. In twenty-four hours labour pains commenced, and in fourteen hours, the labour was completed; the infant was very feeble, only six months, not seven as was believed, and died two hours after its birth. Its length was fourteen inches; weight three pounds and six ounces; the occipito-frontal diameter was three inches; the transverse, or parietal diameter, two inches and one line. The mother had some symptoms of inflammation of the uterus, but recovered so rapidly, that in fifteen days she left the hospital perfectly well.—*Annali Univ., May*, 1827.

60. *Cæsarian Operation.*—The Germans resort to this operation much more frequently than other nations, and, judging from the reports which reach us, with great success. In the September number of the Bulletin Univer., we have two other cases reported as having been performed with safety to mother and infant. One by Dr. LANTZ, on a female, aged thirty-one years; the sacro-pubic diameter of whose pelvis, was but two inches and nine lines. The operation was performed two days after the commencement of labour pains; the strength of the mother being still very good. The success was complete.

The second operation was performed by the celebrated surgeon, Professor GRAEFE. The mother was a rachitic female, aged thirty years; all the diameters of the superior strait were unnatural, the sacro-pubic was reduced to two inches and three lines. The operation was performed after the uterine contractions had existed fifty hours; and lasted but three minutes and a half. The mother left the hospital well, in two months.

Professor GRAEFE thinks he has diminished the dangers of this operation by his manner of treatment; of which we give the following summary. The operation should be performed, if possible, at the full period of utero-gestation, and at the time labour has commenced; the incision should be made through the linea alba, below the umbilicus, and should extend five inches; the incision into the uterus should be four inches and six lines in length. To prevent the escape of the intestines through the first or external wound, Dr. G. advises the employment of large pieces of sponge prepared with wax, each being one foot long, six inches broad, and nearly three inches in thickness. Three such pieces are necessary for one operation. They should be applied to the abdomen, so as to leave for the incision, a space eight inches long, by three or four wide, and are to be retained by two or three assistants, who should make moderate pressure with the hand; care being previously taken, that every portion of intestine has been removed from the place reserved for the incisions. Pressure on the sponges will then keep the bowels at a distance, and prevent their escape. If the placenta be not completely detached, it should be removed by the surgeon, in preference to its remaining in the uterus. The edges of the wound in the abdomen, should be kept in contact by sutures made with very soft ribands, eighteen lines in width, and with flat needles with two cutting edges. Three sutures, thus effected, are as advantageous, as six others with a simple thread. Further to secure the lips of the wound, four or five adhesive straps are necessary; each one being eighteen lines in breadth, and long

enough to pass once and a half round the abdomen; the middle being applied to the back, and the extremities crossing in front, above, below, and between the sutures. After the operation, the mother demands rest, and sedatives, as laurel water, the extract of henbane, or the infusion of belladonna, to be administered as enemata. When inflammation ensues, the loss of blood is the best remedy; salts and calomel do not answer. If nervous symptoms arise, opium, with the ethers, in small and repeated doses, are useful, while attention is to be paid to the lochial discharge and the mammary secretion. In the management of the wound, the sutures and the kind of suppuration demand attention, especially at the inferior portion of the wound. The adhesive plasters ought to be continued for a long time.

VIII. CHEMISTRY AND PHARMACY.

61. *Continuation of Dr. Wœhler's Experiments on the Passage of Substances into the Urine.*

ORGANIC COLOURING MATTERS. *Indigo.*—MM. TIEDEMANN and GMELIN found the urine tinged of a greenish-blue, in a horse that had taken, three hours before, a pound of the solution of indigo, in sulphuric acid, neutralized by potassa.

Rhubarb.—It has been long known, that the internal exhibition of rhubarb gives a yellow tinge to the urine, and that, in this state, it becomes red by the addition of potassa. TIEDEMANN and GMELIN observed this in a horse, that had swallowed six ounces of the tincture of rhubarb. HOME remarked the passage of rhubarb into the urine in the space of seventeen minutes. WESTRUMB detected rhubarb in his own urine, at the end of ten minutes after it was swallowed. According to BRADNER STUART, the urine is slightly reddened by potassa, after a general bath of the infusion of rhubarb.

Beets.—According to BARKHAUSEN and GRUITHUISEN, this root communicates a red colour to the urine.

Root of the Great Celandine.—This root renders the urine much more yellow than natural.

Damson Plum.—A case is recorded of a female, whose urine was always as black as ink, after eating this fruit.

Gamboge.—A tincture, made from an ounce of this gum, increased considerably the yellow colour of the urine in a horse.

Madder.—The continued use of this substance tinges the urine of a red colour. The same result takes place, when it is applied to the skin, in the form of a bath. Its presence in the secretion is easily detected by the addition of potassa.

ORGANIC ODOROUS MATTERS. *Oil of Turpentine.*—No fact is better determined, than that the internal and external use of this oil, as well as the inhalation of its vapour, very quickly communicates a violet odour to the urine. The peculiar character of the odour is not explained; for, on mixing oil of turpentine with ordinary urine, the violet smell is not developed. Juniper berries communicate a similar odour to the urine.

Valerian—Castor.—According to JOHN, the urine of persons, employing valerian, acquires the odour of myrrh; according to Dr. WŒHLER, a smell, sui generis, difficult to describe. Castor also communicates the myrrh odour.

Viola Tricolor.—The infusion of this plant is esteemed, by the continental physicians, to be very useful as a remedy in crusta lactea of infants. It

communicates a peculiar odour to the urine, which has been compared to the smell of the urine of cats.

NARCOTIC PRINCIPLE. *Agaricus Muscarius.*—Dr. WŒHLER conceives, that the narcotic principle, contained in the agaricus muscarius of Kamtschatka, must be classed amongst the substances, which find their way into the urine. The Kamtschatdales and Korecks, prepare, from this agaric, a kind of intoxicating drink. But what is very remarkable is, that the urine of those who are intoxicated by it, acquires, and preserves for a long time, a narcotic property, which is even stronger than that of the primitive preparation. The people, accordingly, preserve their urine after eating the agaric, for the purpose of being used as an intoxicating drink.

ANIMAL SUBSTANCES. *Albumen.*—This substance is found very frequently in the urine of dropsical patients. The therapeutical deductions to be drawn from its presence, have been carefully studied by Dr. BLACKALL and Dr. PROUT; to whose works we refer the reader, or to a review of the work of the latter, contained in Vol. ii. p. 125. of this Journal.

Casein.—CHATELAIN reports the case of a Creole, who voided a lactescent urine, the appearance being derived from the presence of casein.

Chyle.—Pus.—Blood.—Bile.—It is well known, that all these substances are occasionally found in the urine.

MATTERS WHOSE PASSAGE INTO THE URINE IS CONSIDERED DOUBTFUL. *Carbonic Acid.*—MM. VOGEL and PROUT were the first to announce, that carbonic acid was a constituent in urine. This acid appears to exist in it, in the same proportion as in blood. We have frequent examples on record, of urines which contained an excess of carbonic acid, after the use of Seltzer water. The same fact has been observed by BRANDE, who obtained, by means of the air pump, from urine voided an hour after the ingestion of carbonic acid water, a large quantity of this acid. Dr. MARCET, however, failed in this experiment, and thinks that the passage of carbonic acid into the urine is not probable. Dr. WŒHLER has made some experiments on himself, with a view to determine this point. After drinking plentifully of carbonic acid water, he was not able to detect any redundancy of this acid in his urine. He is, therefore, disposed to admit, with MARCET, that carbonic acid, introduced into the animal economy, does not enter the urine; that this secretion never contains a greater amount of the acid in question, than the blood itself; and that all excess of this gas, which may be introduced into the system, is eliminated by the lungs and skin.

Iron.—Dr. WŒHLER has made many experiments on dogs, to determine the question of the passage of iron into the urine. He employed various preparations of the metal; but they were uniformly rejected by vomiting, unless when taken in very small quantity, and, in this latter case, no iron could be detected in the urine. Nevertheless, the experiments and observations of a number of writers prove incontestibly that iron is occasionally found in the urine.

Lead—Bismuth.—TIEDEMANN and GMELIN were in no instance able to detect lead in the urine of dogs, to which they had given large doses of acetate of lead. Dr. WŒHLER has made the same observation with respect to bismuth.

Mercury.—TIEDEMANN and GMELIN gave three drachms of protacetate of mercury to a horse, and to another, half an ounce of bicyanide of mercury; but could detect no trace of the metal in their urine. Nevertheless, the experiments of Dr. CANTU prove, that mercury may pass into the urine. Dr. C. collected sixty pounds of urine from syphilitic patients, and obtained from the sediment more than twenty grains of mercury.

Camphor, Alcohol, Musk, &c.—It may be asserted confidently, that camphor is not excreted by the urinary passages, but by the lungs and skin.

This is demonstrated both by the experiments of TIEDEMANN and GMELIN, and those of SEILER and FICINUS. Dr. WŒHLER caused a dog to swallow a drachm of camphor, without communicating the least odour to the urine. According to the same experimenters, alcohol, musk, and the animal oil of DIPPEL do not pass into the urine. Dr. WŒHLER was unable to detect the odour of sulphuric ether in the urine of a man affected with tænia, who took, daily, half an ounce of this ether. Neither are the colouring principles of cochineal, of alkanet, or of litmus, to be detected in the urine. Dr. WŒHLER gave two drachms of the tincture of litmus to a dog, whose urine, four hours afterwards, afforded no trace of the colouring matter, upon the addition either of an acid or alkali.

PHYSIOLOGICAL DEDUCTIONS.—From the experiments and observations which have been related, the following deductions may be drawn:

I. Iron, lead, alcohol, sulphuric ether, camphor, the animal oil of Dippel, musk, and the colouring principles of cochineal, litmus, and alkanet do not pass into the urine. It would also appear proved, that when liquids containing a good deal of carbonic acid are swallowed, the quantity of this acid naturally existing in the urine is not increased.

II. The following substances are found in the urine in a decomposed state: the combinations of potassa and soda, with the tartaric, malic, and acetic acids, transformed into alkaline carbonates; and the hydrosulphate of potassa, converted in part into sulphate of potassa.

III. The substances, which form new combinations with substances belonging to the animal body, and are excreted by the kidneys in that state, are, sulphur, which becomes sulphuric and hydrosulphuric acid; iodine, which is evacuated in the form of an hydriodate; and the oxalic, tartaric, gallic, succinic and benzoic acids, which are found in the urine, combined with an alkali.

IV. The substances which pass into the urine without change, are, the carbonate, chlorate, nitrate, and ferrocyanate of potassa; the subborate of soda; the muriate of baryta; the silicate of potassa; the tartrate of nickel and potassa; many colouring principles, such as indigo dissolved in sulphuric acid, gamboge, rhubarb, madder, beets, &c.; many odorous principles, but for the most part, with a modification of odour, as for example, oil of turpentine, juniper berries, valerian, castor, &c. and, lastly, the narcotic principle of the agaricus muscarius of Kamtschatka.

I. *As to the substances which do not pass into the urine.*—Their exclusion may be attributed to one or other of the following circumstances:

1. Certain substances may be so destroyed in the processes of chylification and sanguification, as not to appear even in a modified form in the urine. Many of the colouring principles may be in this relation to the animal economy.

2. Other substances, harmonizing more completely with the animal organization, may be assimilated, and employed in nutrition.

3. Others again may be eliminated by other emunctories; as, for example, camphor, and many other odorous principles, which pass off by the skin and lungs.

4. Finally, other substances, upon entering the intestinal canal, may pass into an insoluble state, and thereby become unfit for absorption. This, probably, is the case with tannin, and with the salts of lead, iron, and some other metals.

II. *Substances which pass into the urine in a decomposed state.* The circumstance of decomposition may be attributed to two causes, diametrically opposite. 1st, a deoxidizing power; and, 2ndly, an oxidizing power in the animal substance. Thus the hydrosulphate of potassa becomes the sulphate by an oxidizing process, probably occurring in the lungs.

The conversion of vegetable alkaline salts into carbonates, occurs, most probably, during their presence in the blood; and appears to be effected in the lungs, by the oxygen of the inspired air.

III. Substances which form new combinations, before they pass into the urine.—It has been stated that several of the vegetable acids pass into the urine, only by forming a combination with some base, in the course of the circulation. Dr. WŒHLER has found difficulty in making experiments to elucidate this point; but he states that BERZELIUS gave to a patient, whose urine was alkaline, the acetic, sulphuric, and phosphoric acids, without rendering the secretion acid; but when the phosphoric acid induced catharsis, then the urine became acid. MAGENDIE has made the same remark. Dr. WŒHLER adds, that, from the above observations, as well as those which he has himself made, he is inclined to the opinion, that acids, taken into the stomach, do not pass into the urine, either in the free state, or as super-salts, until they have been taken in quantities so considerable, as to be sufficient to neutralize the salifiable bases, contained in the blood and other parts of the body. Accordingly, it is not to be inferred that an acid has not passed into the urine, because this secretion does not exhibit more than its ordinary acidity.

IV. Substances which pass into the urine without change.—Dr. WŒHLER considers these substances as the true and invariable diuretics: that is, substances which necessarily augment the secretion of urine, by the stimulation which they afford, while passing through the kidneys. Substances which are diuretic under particular circumstances only, Dr. W. would exclude from the class of diuretics; such as bark, digitalis, &c.; for otherwise, every substance in the materia medica, might in its turn be called a diuretic. Water alone forms ninety-three per cent. of urine. It may be considered, not only in the light of a menstruum for the other ingredients of the urine, but as a principal product of the function of the kidneys, which embrace in their office the removal of any excess of watery particles. This function holds also an intimate relation with those organs destined to secrete the humours, as the lungs, skin, and digestive canal. In cases of profuse sweat or diarrhœa, water is abundantly evacuated with these excretions, and the urine becomes diminished and high-coloured, while all its principles, except water, are in relative excess. Physicians should be on their guard, not to draw erroneous conclusions from this change, which depends entirely on the deficiency of water.

PREVOST and DUMAS, having found a considerable quantity of urea in the blood of dogs, cats, and rabbits, after the extirpation of the kidneys, have been led to conclude, that urea, as well as the other immediate principles of the urine, exists in the blood. They cite, in support of their opinion, the phenomena of arthritic concretions, formed as they are of urate of soda, and the intimate relation which subsists between arthritis and the morbid production of uric acid. The experimental results, of P. and D., have been confirmed by SEGALAS and VAUQUELIN.

Most of the substances contained in the urine possess a diuretic property. The Arabians have long been in the habit of employing the urine of the sheep and ass as a diuretic remedy; and the Italian physicians have extolled the urine of the calf, as an excellent stimulant to the urinary secretion. According to the experiments of SEGALAS and VAUQUELIN, the diuretic property of urea, taken internally, or injected into the veins, is so great, that they propose to class this substance among the diuretics.

Therapeutical Deductions.—The property of the vegetable alkaline salts, of being converted into alkaline carbonates in the course of the circulation, and of appearing in this form in the urine, naturally suggests the idea of using the vegetable salts, instead of the carbonates, in the uric acid dia-

thesis. The advantage we might hope from the vegetable alkaline salts, over the carbonates, would consist in the ability to continue their use for a much longer time, without weakening the digestive organs. Besides, they are much more agreeable to the taste; and being a numerous class of salts, the practitioner has the choice of a number of remedies of equal efficacy.

Without pretending to advocate the opinion, that the good effects of alkaline carbonates in the uric acid diathesis, depend exclusively on chemical principles, Dr. Wœhler, nevertheless, makes the remark, that urine, rendered alkaline by the addition of three drachms of acetate of soda, not merely dissolved uric acid in powder very readily, but acted, in a few days, on large fragments of uric acid calculus, to such an extent as sensibly to corrode their surface. It has generally been supposed that uric acid was insoluble in the alkaline carbonates, but this is a mistake.

From what has been said, it, therefore, appears, that the salts which may be substituted for the alkaline carbonates, in the uric acid diathesis, are, the bitartrate of potassa, (cream of tartar;) tartrate of potassa; borotartrate of potassa and soda, (soluble cream of tartar); the tartrate of potassa and soda, (Rochelle salt;) and the acetates and citrates of potassa and of soda: and as it has been proved, that fruits containing an alkaline vegetable salt, such as cherries, strawberries, &c. have the property of rendering the urine alkaline, these also may be employed in the same diathesis.

The above is not a matter of mere inference, but of fact. Professor Chelius advised a patient, who had for a long time passed the uric acid gravel, to eat daily a large quantity of cherries: the gravel quickly disappeared, and the urine became natural. After the cherry season had passed, the patient substituted with the same success, the cream of tartar lemonade. Dr. Wœhler also had occasion to prescribe the bitartrate of potassa to a man, who had for a long time voided small renal calculi of uric acid. The urine soon became limpid; and, the day after the patient commenced the treatment, he passed a renal calculus of considerable size.—*Journal des Progrés des Sciences Médicales*, Vol. II. 1827.

62. *Residuum of Nitre, after Exposure to a red heat.*—In the beginning of the month of May last, Mr. Robert Bridges, Student of Medicine, of this city, made an observation respecting the nature of this residuum, in the laboratory of one of the editors, which deserves to be recorded. Upon pouring water into an iron mercury flask, (which had been used for obtaining oxygen from nitre,) for the purpose of washing it out, this gentleman observed a lively effervescence to occur, which led him to investigate the nature of the gaseous matter evolved. Much to his surprise, he found it to consist of oxygen, of the purity of 95 per cent. as ascertained by the accurate sliding rod eudiometer of Dr. Hare. I urged Mr. B. to pursue the investigation, with a view to ascertain the source of this oxygen, and to publish a note of his results. The same gentleman, while operating as my assistant in the laboratory of the Franklin Institute, about six weeks ago, made the same observation as in the spring; but in this case the oxygen obtained was purer, containing only 1 per cent. of impurity. Upon mentioning these facts, several weeks ago, to Dr. Hare, this chemist immediately gave a rationale, which is evidently the correct one. The residuum, he conceived, must be the peroxide of potassium, which, by the affusion of water, gives off its second dose of oxygen, and becomes converted into hydrate of potassa.

A few days ago Dr. Hare sent me a number of the Annals of Philosophy for April last, by which I find that Mr. Bridges's observation has been

anticipated by Mr. Richard Philips, of London, who gives the same rationale of the fact which occurred to Dr. Hare. Notwithstanding this, it is thought proper to publish this note; as serving to confirm the accuracy of independent observations, made in different parts of the world about the same time.

It is suggested by Mr. Bridges, that peroxide of potassium obtained in this manner from nitre, would form a good preparation, from which to obtain pure oxygen, without the least trouble to the experimenter.—*Jan.* 9, 1828. F. B.

MISCELLANEOUS.

To Subscribers.—The late appearance of the present number is owing to a series of occurrences, unusual in their kind, and, therefore, little liable to interfere again. To a fire in our printing-office, succeeded a combination of the journeymen to "strike work" for an advance in wages, and, finally, a determination, on the part of the Editors, to insert, by a somewhat longer delay, the valuable Report of a Committee of the Medical Society. These we conceive sufficient causes for a procrastination of fifteen days.

No effort will be spared, in future, to produce the Journal with becoming punctuality.

We beg to call the serious attention of our surgical readers to the interesting remarks of our absent and valued fellow-labourer, Dr. La Roche, now in Europe, upon the operation of M. Civiale. A note to this purport was designed for the proper place, but mislaid, in consequence of the quickness with which we were glad to hurry Dr. L.'s communication to the press. We apprehend that great importance ought to attach to his remarks upon the causes of the failure of this very desirable operation in the United States; both from their abstract weight, and from the peculiar advantages which he possessed, as an eye-witness of Dr. Civiale's proceedings and success.

New Experiments on Poisoned Wounds.—We are informed that Mr. C. W. Pennock, of this city, has performed a series of experiments on poisoned wounds; in which he has found that the pressure of a flat, circular body, *in all instances*, arrested the consequent symptoms with the greatest promptitude, to re-appear when the pressure was interrupted. This fact is worthy the attention of those who are exposed to the bites of rattlesnakes, as well as of physiologists.

Vaccination in North Carolina.—Extract of a letter from Dr. Jos. C. Skinner, of Edenton, N. C., to Dr. William Darrach; dated, Nov. 25, 1827.

The small pox has appeared among us, and continues to spread in the town; but has not, as yet, extended into the country. Vaccination has been generally practiced in the town, but the country people are still opposed to it. The recent proofs of its antivariolous effects have tended to inspire confidence in a great many. We have been, and are still, striving to convince them that the only possible way to arrest the progress of the disease is to resort to this valuable preventive.

Medical Convention in Ohio.—We extract the following interesting article of intelligence from the Cincinnati Saturday Evening Chronicle, handed

to us, for the purpose, by a valued friend. The conferences and co-operation of physicians, in every part of our country, always furnish agreeable news.

MEDICAL CONVENTION OF OHIO.

This body, in pursuance of a provision of the law creating it, met at Columbus, on the 10th inst. Twenty out of the twenty-two Medical Districts of the state, were represented. JOHN WOOLLEY, M. D., of this city, was chosen President, and JOSEPH FLANNER, M. D., of Zanesville, Secretary. The proceedings will shortly be published in pamphlet form.

Among other subjects presented for the consideration of the Convention, was that of the Medical College of Ohio. We are informed that a memorial was passed, by a vote nearly unanimous, recommending to the Legislature the appointment of a new board of Trustees for the government of this institution, and a re-organization of its Faculty.

American Journal in the French Language.—Dr. XAVIER TESSIER, the learned and ingenious editor of the Quebec Medical Journal, has sent us a prospectus of a new and great work, in which the former is to be merged. The *Journal des Sciences Naturelles de l'Amerique du Nord*, is to be published at New York; as a central point to the large amount of French population which exists in Canada, in the United States, and in the West Indies. In the term *Natural Sciences*, Dr. TESSIER includes, without any deviation from correctness in diction, the departments of *Medicine, Surgery, Anatomy, Physiology, and Materia Medica;* which he combines with *Botany, Natural History, Chemistry and Mineralogy.* This vast field will require the largest periodical yet addressed to physicians within these states, viz. a volume of 300 pages, quarterly.

Dr. TESSIER has it principally in view, in establishing this work, to furnish an account, in the French language, and, therefore, accessible to his countrymen, of the discoveries and other novelties which are accumulating both in the United States and in England; while, at the same time, he supplies his readers with the scientific news of the land of their ancestry, without obliging them to receive it strained through the medium of a foreign language, as is at present the case with most of those settled in America. The work is to contain, first, a collection of Extracts of a scientific nature; next, a series of Analytical Reviews; in the third place, an Original department; and finally, the proceedings of societies, the titles of books, medical biography, and other Miscellaneous matters.

Every lover of science cannot but wish well to Dr. TESSIER's noble and useful undertaking.

Price, $6, payable on the delivery of the first and third numbers.

Transylvania Journal of Medicine and the Associate Sciences, edited by JOHN ESTEN COOKE, M. D. and CHARLES WILKINS SHORT, M. D., Professors in Transylvania University. To be published quarterly, in numbers of one hundred and fifty pages.—We have only space to announce this new Journal, and to express our hopes for its success; founded upon the room which exists for it in the Western Country, and the talents of its editors, and the other members of the useful school from which it emanates.